TRANSPORTATION PLAN

- CIRCULATION ELEMENT
- BIKEWAYS ELEMENT
- TRANSIT ELEMENT
- AVIATION ELEMENT
- OTHER TRANSPORTION MODES ELEMENT

SAN LUIS OBISPO COUNTY
CALIFORNIA

JUNE 1979

TRANSPORTATION PLAN

OF THE

SAN LUIS OBISPO COUNTY GENERAL PLAN

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INTRODUCTION

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LEGISLATIVE AUTHORITY

The California Legislature, through the requirement of a Circulation Element, requires that local governmental agencies identify and analyze the circulation needs and issues of their communities. Specific authority and mandate for the Circulation Element is derived from the Government Code Section 65302(b) which requires the following:

> "A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals and facilities, all correlated with the land use element of the plan."

This Section of the Government Code basically requires cities and counties to account for the highways, transit routes and other modes of transporting people and goods in their planning areas. This applies to both those currently available and those predicted to be available in the future.

Other sections of the Government Code particularly applicable to the Transportation Plan include 65303(b), (c), (d) and (e). These refer to other elements which may be included in a Transportation Plan.

The San Luis Obispo County Transportation Plan including a Circulation Element meets the intent of the Government Code Sections which specifies "Circulation Element" in the preceeding paragraphs.

PURPOSE AND APPROACH

As a part of the General Plan, the Transportation Plan acts as the official guide to elected officials, staff, citizens and private organizations concerned with transportation in San Luis Obispo County. This Plan is intended to establish policy and direction, enabling the County to meet the transportation needs of an increasingly mobile public and to enhance the quality of life for people in San Luis Obispo.

The goals, policies, and implementation procedures act as the heart of the Transportation Plan. This information should be used in conjunction with other General Plan Elements and established policies, and should play a major role in determining future land use.

Transportation in today's complex environment has come to be viewed as more than a means of travel. There is the realization that transportation and land use are interdependent and that there is a critical relationship and interaction between transportation and other planning elements such as housing, open space, recreation, and economic development.

A transportation system has a major impact on the area and activities which it serves, on community cohesion, and on the quality of human life. The County Transportation Plan must be planned around the pattern of land use, and in turn, the type and intensity of proposed land uses need to be kept in scale with the proposed transportation system. Recognition of these factors will enable County officials and staff to determine the circulation needs of San Luis Obispo County and provide an effective transportation system for its citizens.

Highways presently are the basic means of meeting the County's and indeed the Nation's transportation needs. In recent decades, air travel has achieved prominence as a major transporation mode for longer journeys and now serves a large portion of inter-regional and interstate travel. Rail transport during this time had been on the decline. Recently, however, a renewed interest in passenger travel has developed throughout the County. The increase in ownership of boats and aircraft has placed a large strain on existing facilities.

With a trend toward higher cost of auto and truck travel and the escalating cost of highway construction, a changing relationship between the transportation modes can be anticipated. Public transit can be expected to play a larger role in providing mobility. In the long range view, other shifts such as greater use of pipelines for commodity flow

and the development of high speed regional rail systems could change the overall transportation system by the end of this century.

SAN LUIS OBISPO COUNTY TRANSPORTATION PLAN

The San Luis Obispo County Transportation Plan has been abstracted and adapted from the San Luis Obispo Regional Transportation Plan, Revised, 1977, prepared for the San Luis Obispo Area Council of Governments.

The County Transportation Plan consists of five separate elements. These elements include the:

- Circulation Element
- Bikeways Element
- Aviation Element
- Transit Element
- Other Transportation Modes Element
  - Harbors
  - Rail
  - Transmission and Pipelines
  - Transmit Terminals

Each of these elements discusses a means of transporting either people or goods and makes recommendations toward those ends.

This Transportation Plan will constitute the mandated Circulation Element of the County General Plan. It meets all guidelines as outlined by the Council on Intergovernmental Relations for a Circulation Element of the General Plan.

This Plan also supercedes the following adopted General Plan Elements:

Major Routes Circulation Element (1966)
The County Aviation Plan (1970)

Concurrently with this Transportation Plan, a new Land Use Element is being developed by the County Planning Department. There is a tremendous interdependence between land use and transportation. As such, the Land Use Element is intended to integrate the proposals made in the County Transportation Plan in its policies and standards. The Land Use Element will identify special standards and programs for critical transportation features and will include greater geographic detail. Proposed Urban Reserve Lines and Urban Service Lines are officially adopted as part of the County Land Use Element.

Changes from the original proposals made in the Regional Transportation Plan included in this Plan have resulted from further evaluation both independently and as part of the Land Use Element effort.

NOTE: Throughout this report, reference is made to figures and data from the San Luis Obispo Area Council of Government Transportation Plan and from the technical reports preceeding that document. A detailed analysis of recommendations made in the County Transportation Plan may be found in those documents.

SAN LUIS OBISPO REGIONAL TRANSPORTATION PLAN

The San Luis Obispo Regional Transportation Plan was prepared under the requirements of Assembly Bill 69 which created the California Department of Transportation and set up the statewide transporation planning process.

The requirements for a Regional Transportation Plan as outlined by A.B. 69 are quite similar to the requirements of the Government Code for a County Circulation Element of the General Plan. The Regional document was, in fact prepared for purposes of adoption by each jurisdiction lying within the County.

The Regional Transportation Plan is a coordinated set of proposals maintaining and improving the transportation system in the San Luis Obispo Region. It is divided into two segments; the policies and projects for the development of a transportation network during the next 20 years; and the goals and objectives which describe an ultimate transportation plan, commonly referenced to as the "Horizon Year" plan. The County Plan concentrates on the total transportation needs without specifing a date for implementation of all recommendations. Priority recommendations, however, are included for those improvements most needed by 1995.

Since the original Regional Transportation Guide was written, a new Assembly Bill, A.B. 402 has been passed which supercedes A.B. 69. The purpose of A.B. 402 is to "substantially reform state and regional transportation planning and programming by simplifying and clarifying the process, consolidating boards and commissions and increasing the responsibility and effectiveness of the Legislature in transportation policy and budgeting decisions."

An 11-member board known as the California Transportation Commission (CTC) has been appointed and will be submitting a report to the Legislature that will constitute the California Transportation Plan every two years.

TRANSPORTATION PLAN GOALS AND POLICIES

The goals and policies for the County Transportation Plan were taken from the Regional Transportation Plan. The goals and policies were first defined by an 18-member Citizen's Advisory Committee appointed by the Regional Transportation Planning Agency. The Committee's recommended goals were adopted and incorporated into the Regional document reflecting the Region's attitude about transportation.

The following are the goals of the County Transportation Plan:

1. In developing the County Transportation Plan, the betterment of the quality of life shall be the yardstick against which all plans and programs are measured.

2. The County Transportation Plan is patterned after the Regional Transportation Plan and as such should be compatible with plans of the several cities within the County.

3. The transportation system should be a well-coordinated multimodal system that is sensitive to the needs and desires of its citizens. Similarly, transportation programs should serve to reinforce Federal, State, Regional, and local agency goals including land use, population, employment, urban development and environment.

4. The transportation system should be compatible with the environment, avoid the despoilation of irreplaceable resources, use available resources wisely, promote the aesthetic quality of the County and minimize environmental changes.

5. In developing the County transportation system, all proposals should be financially and politically feasible, and have broad public support.

6. Proposed transportation system should be designed to maximize safety and ensure a high quality of facilities using all economically and technically feasible means available.

7. Transportation systems should minimize social, environmental and economic disruption and be designed to meet the needs of all social groups.

COUNTY TRANSPORTATION ISSUES AND CONFLICTS

While the transportation goals provide overall direction for transportation planning in the County, it must be recognized that in many cases, conflicts arise in achieving these goals. The specific policies which underlie the goals are not always compatible, and satisfying one policy can sometimes mean not satisfying another. Many of these issues will be elaborated upon within the several elements, however, discussion of issues related to the overall transportation system warrant discussion here.

The principal County transportation issues can be summarized as follows:

1. Environmental Issues Relating to Highways

Under our present day dependence on the automobile, the need to provide mobility often creates serious conflicts with the need to preserve or enhance environmental quality. Noise, air quality and the physical presence of the highways themselves create situations in which increases in traffic are seen to cause undesirable impacts.

The environmental issues relating to highways can be separated into two categories:

(a) Facility related impacts caused by the construction of highways and their physical presence.

(b) Traffic related impacts caused by the presence of traffic on the highway.

In each case the specific issues are dependent on locality and a distinction can be made between highways in rural areas and those in urban areas. In rural areas the primary impacts are often on the natural resources of the area; in urban areas, the adverse impacts tend to be noise, safety and violation of neighborhood character.

The question of environmental impact from highways and traffic is a complex one and considerable attention was given to it in developing the highway plans. However, the tradeoff between mobility and environmental quality is a critical one to transportation planning, and seldom can a "best" plan be developed which satisfies both. Even the "do nothing" alternative will in the long run, not only adversely effect mobility, but also environmental quality.

2. Environmental Issues Relating to Other Modes of Transportation

Because of their more visible and ubiquitous nature, highways and the traffic on them tend to create the greatest concerns in terms of environmental impacts. However, the issue of mobility versus environmental quality is not limited to highways. Airports and the associated aircraft activity can create a variety of impacts of which noise is of primary concern. Similarly seaports, railways, pipelines, and transmission lines have attendant impacts both from their physical presence and the activities or commodity flows associated with them.

3. Economic

The need for mobility must not only be balanced against the adverse environmental impacts, but also against the actual financial costs of providing that mobility. Essentially, the issue is one of "What level of transportation can the County afford?" Taking a broader view however, it can be seen that the issue is considerably more complex. "Who pays?" and "How?" are two of the key questions. The degree to which transportation financing competes with other community financing needs is also an economic issue and particularly in the case of transit, can create potential conflicts.

Some of the key economic issues are summarized as follows:

(a) The cost of investing highway improvements, and the means by which the improvements will be financed.

(b) The extent to which investment in highway improvements to serve recreation travel needs is justified.

(c) The need for financial support for transit.

(d) Transit versus highway in competing for funds (e.g. SB 325 funds from State gasoline tax).

(e) The costs and financing of improvements on non-highway modes (e.g. airports, seaports).

(f) Financing for bicycle facilities.

Regardless of mode, the basic issue is the need for mobility versus the cost of providing that mobility.

4. Growth

Growth is a fundamental issue in transportation planning. San Luis Obispo County is only beginning to experience transportation deficiencies, and the transportation plan is therefore not one of reactive planning but one which keeps pace with anticipated growth. In reactive planning, the deficiencies are already apparent and the question is how to overcome the existing deficiencies, rather than how to avert future deficiencies. Since this plan seeks to avert future deficiencies, it is therefore based on specific growth assumptions which themselves tend to become issues.

As with any region, there are both pro-growth and anti-growth proponents. In the northern part of the County, the City of Paso Robles is encouraging growth and is actively pursuing major transportation improvements to support their growth policies. This policy could have a major effect on Transportation Facilities in the North County and, as such, should be watched for possible conflicts. On the other hand, policies of other communities advocate lesser growth rates, several of which have very limited expansion programs. Some of the improvements recommended in this plan will be controversial in certain areas. Growth and Environmental issues may arise as a reaction to some of these recommendations.

The use of transportation to control or direct growth is an issue in all community planning work. Experience in many urban areas in California has demonstrated the growth inducing properties of new highways, if coupled with inadequate zoning and enforcements. Thus, the provision of highway facilities can to some extent be used to direct growth. However, restricting growth by not providing transportation facilities has generally been less successful, and can be dangerous resulting in loss of life and property through increased accidents. Conversly, if an area grows faster or beyond the limits of the ability to provide critical facilities including transportation improvements, growth control measures may be necessary until those critical facilities can be brought up to standard.

Transportation is only one of the many factors influencing growth and should only be used as such within the framework of an overall set of land use growth policies. Among those considerations would be the appropriate phasing of urban expansion and the commensurate phasing of the transportation system.

Land Characteristics

The County is characterized by a series of five coastal mountain ranges and valleys running almost parallel to the northwest-southeast orientation of the coast. These include the Santa Lucia Range, Temblor Range, Caliente Range, La Panza Range, and San Luis Range. Although not particularly high, the rugged nature of some of these ranges has proved an effective barrier to transportation.

The Santa Lucia Range is by far the most prominent. In the north it forms an imposing barrier between the west coastal belt and the dry interior. In the south it is joined by the La Panza, Caliente, and San Luis Ranges to provide a wide, mountainous complex that swings toward the interior of the County.

Geologically, the County consists primarily of sedimentary rocks which are subject to adverse effects of roadway grading, erosion, and landsliding. In coastal range area, there is a mixture of both weak and strong rock conditions. The soil types as defined by the San Luis Obispo County Open Space Plan range from fertile, well-drained soils conducive to producing high value crops to very poor wasteland.

There are two principal faults traversing the County: the San Andreas and the Nacimiento. Medium intensity earthquakes have been registered in the County in recent years. There is no significant volcanic activity in the County.

A detailed description of the physical environmental setting can be found in the Environmental Impact Report for the Regional Transportation Plan.

Climate

The climate of the coastal area is characterized by long, dry, cool summer seasons with frequent ocean fogs followed by a shorter, wet, winter period with cooler temperatures. The inland area experiences warmer summer weather and cooler winter weather than its coastal neighbor. Most of the precipitation originates from Pacific storms generally occurring from November throuh March. The magnitude and intensity of occasional storms have resulted in severe flooding. Rainfall typically averages 20-22 inches in the coastal area and 18-20 inches inland.

Land Use

The major urban areas of the County are primarily located along the north-south corridor of Highway 101 with smaller concentrations along the coastal corridor. The County is heavily oriented toward agriculture with 60 percent of its land devoted to this land use. Interspersed throughout the County are major recreational facilities which account for significant seasonal visitors. A general breakdown of land use is given below:

Agriculture	60%
Unused	19%
Recreation, conservation, water	17%
Urban Developed	2%
Other (urban fringe, rural residential, nonurban industrial, public)	2%

Socioeconomic

The population of the County (142,500 in 1978) tends to cluster around the urban areas where 78 percent of the total County population reside.

Unemployment has consistently stayed below 5 percent, until 1974 when there was a sharp increase experienced in the County. This can be attributed to national economic conditions and layoffs in construction projects.

The greatest demand for housing is in or near the City of San Luis Obispo. Rental housing in particular is in high demand because of the high student population attending the California Polytechnic State University.

The principal regional center for goods and services is the City of San Luis Obispo. Santa Maria in Santa Barbara County does however contain regional scale facilities which compete for markets in the southern portion of the region. Local goods and services can be found in the larger communities such as Paso Robles, Atascadero, Morro Bay and the Five Cities Area.

As reflected by the land uses within the County, agriculture and recreation represent the major economic activities. Although the farm acreage and production declined from 1956 to 1965, there has been a slight rise and leveling off in the last several years. Overall increases are evident in the value of vegetable crops, fruit and nut crops, and

field crops. Strategically located between the two largest population centers of the State - Los Angeles and San Francisco - the Region has a readily accessible market for agricultural products.

Although the Los Padres National Forest is the largest single recreational facility in area, it accounts for only a small percentage of patronage. On the other hand, State beaches, mainly in the Morro Bay and South Coast areas, account for a significant portion of tourism in the County. In addition, reservoirs in the County also bring many tourists. These recreation facilities are the primary attraction for visitors from the large population centers in the State, particularly Los Angeles, and the San Joaquin Valley.

Because of the scenic beauty and recreational opportunities there is a substantial number of visitors to the County. Summer visitors cause high seasonal variations in transient population levels and in transportation demands. In addition, the high demand for recreational and "second home" housing contributes to both the construction industry and real estate valuations.

EXISTING TRANSPORTATION SYSTEM

Highways

Surface travel in the County is concentrated along two major corridors: 1) the north-south corridor along Highway 101 from Santa Maria (just south of the County boundary) to the northern boundary about 14 miles north of Paso Robles, and 2) the Highway 1 coastal corridor. Other significant travel patterns are oriented along the east-west corridor of Highway 41 and 46, and the Highway 227 corridor between San Luis Obispo and Arroyo Grande. Many of these corridors show high recreational travel demands.

There are 341 miles of State highways in the County. The County road system contains 1300 miles of which almost 50 percent are part of the Federal Aid select system and around one-third of that is classified as Federal Aid Secondary systems. The remainder of the highways in the County are contained within the incorporated cities.

Local transit systems are presently in operation in the Cities of Morro Bay and San Luis Obispo, and in South County offering service to Grover City, Arroyo Grande, Pismo Beach and Oceano. A Dial-A-Ride system provides intra-community transit in Morro Bay, while fixed route systems operate in San Luis Obispo City, the South County, and the North Coast. For interregional travel, San Luis Obispo County is served by the Greyhound Lines coast highway route along Highway 101.

Rail Transit

Rail passenger service is provided by Southern Pacific under contract to the National Railroad Passenger Corporation, commonly referred to as AMTRAK. At the present time service is provided to only one station in the County, at San Luis Obispo. One train a day travels each way to San Francisco and Los Angeles serving an average of 150 persons per day in each direction.

Air

Scheduled air passenger service is provides at two airports within the County - Paso Robles and San Luis Obispo. Swift Aire is based in San Luis Obispo, and commenced service to the San Francisco and Los Angeles corridor in March 1969. It now serves the Central Valley as well.

A third airport, utilized by passengers from San Luis Obispo County is the Santa Maria Public Airport. This facility is served by Swift Aire.

There a number of general aviation airports including the County Recreational Airport at Oceano as listed in the Phase I Technical Report prepared for the Regional Transportation Plan and discussed in the Aviation Element of this Plan.

Harbors

Harbor usage is concentrated in three major activities - petroleum shipping, commercial fishing, and recreational boating. The major harbors in the County are Port San Luis (Avila Beach), Morro Bay and Estero Bay. Port San Luis contains a commercial fishing, fuel and recreation pier, one tanker pier operated by Union Oil Company and a barge facility owned by P. G. & E. Estero Bay has a tanker pier owned by Standard Oil Company and there are also moorings jointly used by Texaco, P. G. & E., and the U. S. Navy. While Port San Luis has a number of commercial and recreational anchorages, it is not heavily used year round due to the lack of protection from winter seas. Plans to develop a recreational harbor at San Simeon may expand the number of harbor facilities presently available in the County. The State has designated Port San Luis, Morro Bay, and San Simeon as Harbors of Refuge.

Pipe and Transmission Lines

There are presently three types of pipelines in the County: aqueducts operated by various water agencies, natural gas lines operated by the utility companies, and petroleum product pipelines under a number of private firms and governmental agencies. The two electric generating plants export power out of the County over high voltage transmission lines to the east and northeast.

Bicycles

The County and Cities are presently establishing bicycle paths and/or lanes based upon previously prepared plans. This report is aimed at expanding the existing facilities to serve both recreation and nonrecreation users.

Terminals

The County contains numerous terminals which serve as the interface between various modes. Examples of major terminals include the AMTRAK Station in San Luis Obispo, the harbor facilities in Morro Bay and at Port San Luis, the aircraft facilities for cargo and passenger at San Luis Obispo and Paso Robles Airports, and the truck terminal at San Luis Obispo, among others.

GROWTH PROJECTIONS

Population and employment growth are important inputs to both the travel forecast process and the financial analysis. The forecasts predict an overall growth in the County of over 50 percent between 1976 and 1995. Morro Bay, San Luis Obispo and Atascadero are expected to experience average growth, with Pismo-Grover-Arroyo Grande higher and Paso Robles lower than average. A summary of the growth projections for each urban area and the County is given in Table I . These estimates indicate that the County is expected to maintain a similar urban structure as exists today with San Luis Obispo continuing as the major County center and growth also taking place in other urban areas.

It should be emphasized here that one of the assumptions used in developing the travel projections was that the rate of trip making will not increase in 1995 compared to its present level. In past decades trip making has shown an increase in its rate (that is, number of trips made per household or per person) due to increases in income and vehicle ownership. Over the last few years this trend has shown a leveling off. Higher gasoline prices and costs of operating an automobile are expected to effectively curtail this trend in the future; hence, it was assumed for the travel forecasting work that trip generation rates would remain at present day levels.

TABLE I

COUNTY POPULATION AND EMPLOYMENT PROJECTIONS

URBAN AREA	POPULATION 1976	POPULATION 1995	EMPLOYMENT 1976	EMPLOYMENT 1995
ATASCADERO	12,800	22,130	3,700	4,150
PISMO BEACH GROVER CITY ARROYO GRANDE	21,900	33,760	6,500	9,250
MORRO BAY	8,400	12,390	3,200	5,650
PASO ROBLES	7,950	10,920	4,400	6,500
SAN LUIS OBISPO	34,300	51,910	18,800	23,050
RURAL	47,200	74,210	11,400	13,350
COUNTYWIDE	127,500	205,300	48,000	62,200

SOURCE: San Luis Obispo County Planning Department
Special Census Data, 1976

CIRCULATION ELEMENT

CIRCULATION ELEMENT

The Circulation Element of the Transportation Plan covers over 1,900 miles of roadway in the County ranging from freeways to unsurfaced country roads. As the basic transportation foundation for the County, the highway system presently services the bulk of all intra-regional travel needs, and must continue to serve most of them in the forseeable future. Personal travel by private automobile, goods movement by truck transportation, and local transit travel, all rely on a safe and adequate highway system. The existing highway system has few capacity deficiencies at present, but farsighted planning is needed to provide a highway system which will ensure adequate mobility with minimum impact on environmental quality.

This element occupies a pivotal position in the Transportation Plan and, as such, many of the major transportation issues appear in this element. The varied effects which these improvements can have both on community mobility and environmental quality are more specifically outlined in this element. Nowhere are the economic, social and environmental conflicts more visible than in the planning of future highways for the County and in major improvements to the existing system. This is especially true within the area covered by the 1976 California Coastal Act.

Since the issues and conflicts differ throughout the County, the Highway Plan is described here under a series of separate sections. The first outlines the recommended improvements to the Regional corridors and State and County roads. Following that, the recommended Highway Elements in and around the urban areas in each planning area are presented.

The circulation plans shown for the County and each planning area reflects the Circulation Elements of the Transportation Plan. Also each principal urban area is treated separately and specific issues relating to the area are more clearly defined.

Discussion of the urban areas is included only to maintain coordination with the County areas and to reflect regional proposals. Any reference made to the incorporated areas is made in this context only.

A five year list of projects, costs and implementation periods are shown in Appendix A of the Regional Transportation Plan. A 20 year financial plan is also provided but only the first five years are detailed.

ROAD CLASSIFICATION

The road classification used in the Regional Transportation Plan was based upon the Federal Functional Classification which classes roads according to their functional use. It also classifies roads based on their regional significance and their State, Federal or local funding requirements.

The Land Use Element's circulation proposals on the other hand will classify the County roads according to the local circulation needs of the individual planning areas. That plan will provide more precise locational information for proposed improvements and will set special standards and programs where appropriate. In general, the County's Standards Improvement Specifications and Drawings provide the minimum standards for the design, criteria and review process of streets and roadways throughout the County. This includes standards for right-of-way and road widths. While these improvement standards are not a direct part of this element, they are integral to its implementation. Improvement standards should be reviewed periodically for consistency with the objectives of this plan.

A legend has been developed combining the two classifications for the County Transportation Plan. In many instances, the road classifications are consistent with one another. The proposed Land Use Element's Element's circulation recommendations are included to insure maximum consistency between County General Plan Elements.

Although local roads are not included in the road classification, they still serve an important function as the basic unit of the circulation system.

The legends used for the Circulation Element are shown on the following pages.

There are a number of roads in the County requiring alternative standards reflecting special environmental concerns or needs. In these places, special design standards and performance criteria, not necessarily conforming to the County Engineering Standards, are required. This may include, for example, landscaped medians, minimum shoulders, and small vista point areas. Some of these design criteria and standards for specific instances will be noted in the appropriate sections of the Land Use Element. Other special design needs may come to light during review of Subdivision and Development Plans, Environmental Impact Reports and Capital Improvement Projects. Examples of the unique areas where alternate standards are needed include: South Bay Boulevard between Turri Road and Quintana Road in the Estero Area, Moonstone Beach Drive in Cambria, and the Ravenna Avenue - 3th Street connection in Baywood Park - Los Osos.

Prior to the implementation of the recommendations made in the following pages, specific detailed plans must be developed. At that stage, detailed engineering feasibility studies will be carried out and functional geometric designs developed so that engineering plans for construction specifications can be prepared.

At the same time, specific environmental determinations will be conducted for each functional plan.

A proposed County Scenic Highways system has been included in the adopted County Open Space Plan. This Plan identifies areas of scenic improvements to the County Highway system and makes recommendations regarding Scenic Highway Designations.

A re-evaluation of the concept of scenic highways in the County needs to be conducted recognizing the advantages and the merits of the scenic highways system.

RECOMMENDED IMPROVEMENTS TO REGIONAL CORRIDORS AND COUNTY ROADS

The recommendations of this plan are based on projected future demand compared to the existing highway system. This analysis showed few highways with severe capacity deficiencies for 1995, although along some of the major corridors the level of service will be at the marginal level. It should be pointed out that in many cases projected capacity deficiencies are due to high peak hour volumes (18% of daily traffic volume), and it is possible that this peaking effect may decrease in the future with higher traffic volumes. Hence in many cases, recommendations are for only minor improvements despite an apparent lack of capacity in 1995. It is anticipated that as volumes increase there will be a tendency for the peaks to flatten and hence for the daily traffic volumes to make better utilization of the highway.

Many of the low volume highways in the County also have a low level of service, this being due to low design standards rather than insufficient capacity. Better gradients, widening to present day standards, curvature alignment and other design features are needed to improve safety and driving comfort.

Access to Nacimiento Reservoir

Of particular concern to the County at the present time is the growth potential at Nacimiento Reservoir. Already various developments have been under construction and others have been approved. The potential exists for considerable growth in population at the various development areas around the reservoir. The 1995 resident population projection is 700 persons (compared to 318 in 1978). However, seasonal and weekend resident population and recreational visitor traffic already far exceed capacity.

COORDINATION OF CTP, RTP, AND LUE ROAD CLASSIFICATIONS

URBAN AREAS

COUNTY TRANSPORTATION PLAN	LAND USE ELEMENT	REGIONAL TRANSPORTATION PLAN (Federal Functional System)	PRIMARY USE	TYPICAL COUNTY ROADS	COLOR CTP	CODE RTP
PRINCIPAL ARTERIAL	PRINCIPAL ARTERIAL	PRINCIPAL ARTERIAL	Interstate Thoroughfare Connecting major populations centers, high traffic vol. of long trip length	Highway 101, Portions of Highways 1 & 46	Red	Red
COUNTY ARTERIAL	ARTERIAL	MINOR ARTERIAL	Integrated network providing intra-state, inter-county services; large traffic volumne on a regional scale linking activity centers.	Los Osos Rd. Highway 58, Highway 166 Portions of Highways 1, 41 and 46.	Blue	Blue
		CONNECTOR	Found in very sparsely developed rural areas; provide service to mining, Ag. or Rec. areas. Low-volume, longtrip length.			Yellow
COLLECTOR	COLLECTOR	MAJOR MINOR COLLECTOR	Channels traffic from minor rural roads to arterials; serves smaller communities	See Canyon Rd. Vineyard Drive Huasna Road	Brown	Green Brown

COORDINATION OF CTP, RTP, AND LUE ROAD CLASSIFICATIONS

RURAL AREAS

COUNTY TRANSPORTATION PLAN	LAND USE ELEMENT	REGIONAL TRANSPORTATION PLAN (Federal Functional System)	PRIMARY USE	TYPICAL COUNTY ROADS	COLOR CTP	CODE RTP
PRINCIPAL ARTERIAL	PRINCIPAL ARTERIAL	PRINCIPAL ARTERIAL	Urban Extension of rural principal arterials carries through traffic of long trip length	Highway 101 Portions of Highways 1 & 46	Red	Red
URBAN ARTERIAL	ARTERIAL	MINOR ARTERIAL	Continuation of intercommunity links within urban areas providing high level of service	South Bay Blvd. Portions of Los Osos Valley Rd., Highway 1 & 41	Blue	Blue
LOCAL ARTERIAL	ARTERIAL	LOCAL ARTERIAL	Provide intra-community conti-nity; moderate trip lengths, localized in scale; access provided	Windsor Blvd Traffic	Green	Green
COLLECTOR	COLLECTOR	COLLECTOR	Channels traffic from local streets to arterials pene-trates identifiable neighborhoods	Pacific Ave. Golden Hill Rd. Buckley Rd. Halcyon Ave.	Brown	Brown

Access to the reservoir is from Paso Robles along Nacimiento Drive and up over the Godfrey grade. The road is of low design standard in parts, and does not have a high capacity. Design standards and performance criteria will be discussed in greater detail through the work of the Land Use Element team. See Figure 2.

Highway 41 & 46 - Kern County Line to Paso Robles

The traffic volumes for 1995 vary from 9000 vehicles per day at Cholame to 13,000 near Paso Robles. At these volumes the level of service falls below the desired level for rural highways and major improvements will be needed.

This highway is the major link between San Luis Obispo County and the San Joaquin Valley. Summer recreational travel is thus extremely high. Although the summer weekend traffic does not produce extremely high peaks (except on a few holiday weekends), there is a significant proportion of recreational vehicles and autos with trailers. The traffic volumes are also highly directional during these peaks. Higher design standards are thus required to maintain safety and driving comfort as traffic increases in this corridor. The plan recommends widening Highway 46 to four lanes from the intersection of Highway 41 and 46 near Cholame to Paso Robles. Four lanes are not recommended from Cholame to the Kern County line for either highway, however.

Future locations for grade separations are shown on the (Horizon Year Plan) Countywide Plan.

Highway 46 - Cambria to 101

This two-lane highway has forecasted volumes of 2,000 vehicles per day in 1995. The present facility will be able to accommodate this volume at the desired level of service with only minor improvements.

Highway 41 - Atascadero to Shandon

With the extension of Morro Road (Highway 41) through the Atascadero Central Business District and across the Salinas River, new importance will be placed upon the remaining portion of Highway 41 to its intersection with Highway 46 near Shandon. Minor improvements will be necessary to widen the pavement and shoulders and to straighten poor and curvy alignments during the plan period.

Highway 41 - Atascadero to Morro Bay

Although volumes are lower here than on the easterly section of Highway 46 discussed above, the gradient, curvatures and sight distances on this section are such that the level of service is lower than desirable. It is expected that the new section of Highway 46 to the north, which also connects Highway 101 to the coast, will relieve traffic volumes on this link. However, there is a considerable volume of traffic travelling from the 101 corridor (Atascadero, Templeton, Paso Robles and points east) to Morro Bay and much of this traffic will continue to use this section of Highway 41. It is therefore an important link in the County network and the recommended level of service should be maintained by a continuing program of upgrading to increase safety and driving comfort.

Highway 1 - SLO Realignment

For details of this proposal, please refer to Recommended Improvements, page 33 .

Highway 1 - Cambria to Cayucos

This two-lane section of Highway 1 has forecast volumes of around 10,000 vehicles per day in 1995. The present facility will be able to carry this volume of traffic at the desired level of service with only minor improvements.

The community of Cambria is centered along Highway 1 and one of the major deficiencies faced by this community is access to Highway 1. The five intersections providing access (Weymouth Avenue, Windsor Boulevard, Cambria Drive, Burton Drive and Ardath Drive) do not have grade separations or signals and deserve further study. Improvement to the Highway 1 corridor in Cambria should particularly focus on these intersections.

In the short range, it is proposed that fully signalized intersections be installed along with any other modifications required to control fast-moving traffic on what is essentially a non-urban highway. In the long term, the number of access points should be reduced if possible, with the provision of fully grade-separated interchanges.

Highway 1 - Santa Barbara County line to Oceano

It is recommended that Highway 1 from the Santa Barbara County line to the town of Oceano be reconstructed to present day standards. The existing highway is relatively narrow with substandard vertical and horizontal alignments.

Highway 58 - Santa Margarita to Two Miles East

There is a relatively minor improvement needed on one of the important cross county highways. It involves correction of a substandard two mile stretch east of Santa Margarita through the purchase of new right-of-way and reconstruction.

Highway 101

Highway 101 forms the major transportation corridor in the County and has been designated by Caltrans as a Highway of Statewide significance. It serves most of the external travel and also carries a large proportion of the intercommunity travel within the County. Parts of this highway are presently only at expressway standard and these sections should be reviewed to minimize hazardous intersections and upgrade certain areas. Before any improvement to full freeway status is implemented however, significant studies should be conducted, investigating not only the traffic needs, but also the environmental and economic consequences of the improvement to full freeway status.

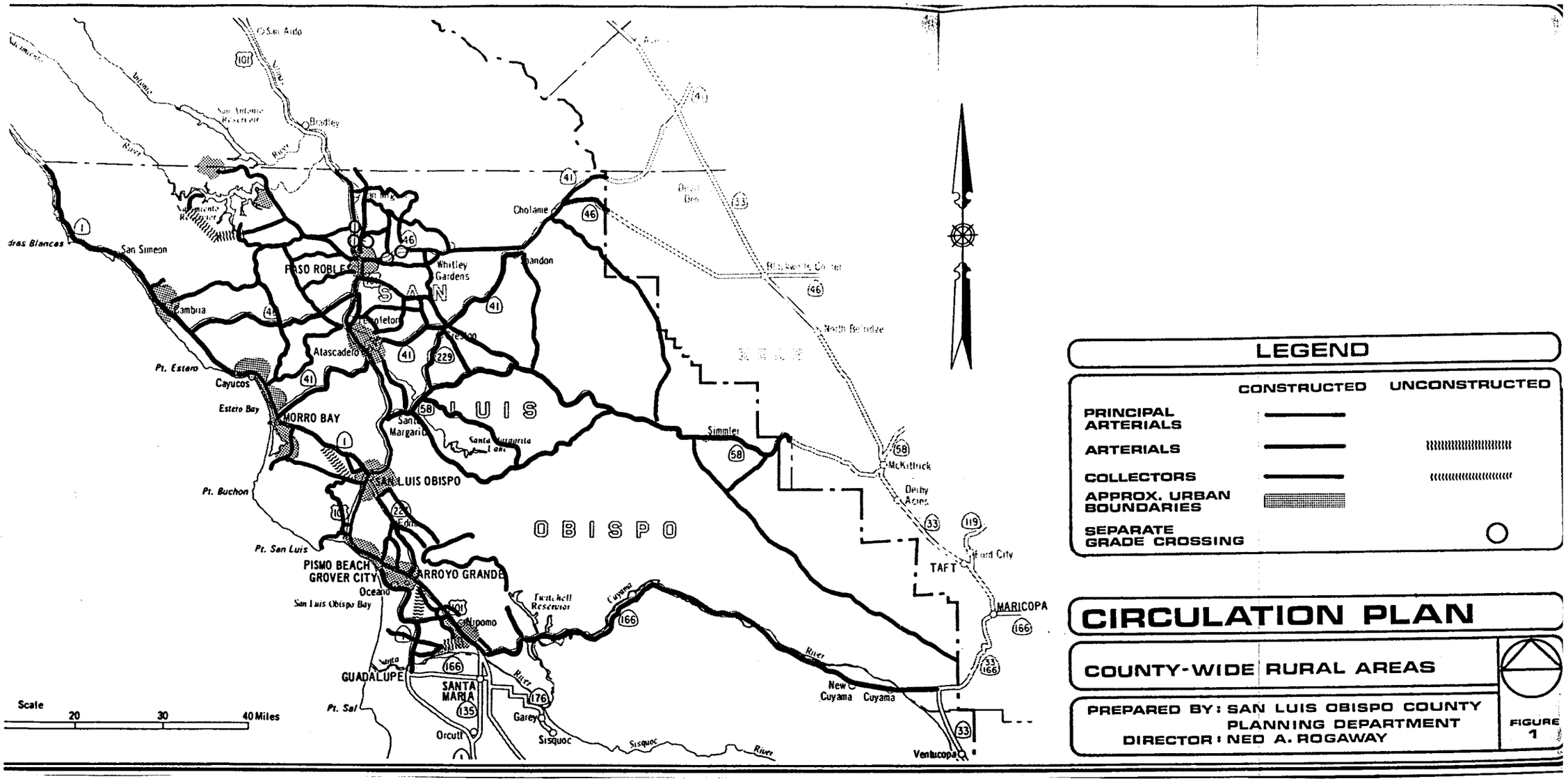
The deficiency analysis showed that the level of service for Highway 101 in 1995 will be in the marginal category from Santa Margarita to Arroyo Grande. The critical areas are Cuesta Grade and in the vicinity of San Luis Obispo and the Five Cities area.

Capacity increases can be achieved along certain sections by closing some of the freeway on and off ramps. The present design standards through San Luis Obispo, for example, cause short weaving movements (which also constitute safety hazards) with a consequent loss in capacity.

Special studies are being made by Caltrans to develop an improvement plan for this highway.

Cuesta Grade

The relatively high proportion of truck traffic on the Cuesta Grade section of Highway 101 reduces the capacity and severely reduces the level of service. The construction of a minimum truck climbing lane has been analyzed as a possible improvement measure. Due to the high scenic values and severe terrain, special design standards should be included for any improvements. It is recommended that extensive environmental and circulation studies be done before any commitment is made to provide a truck-climbing lane on Cuesta Grade.



LEGEND

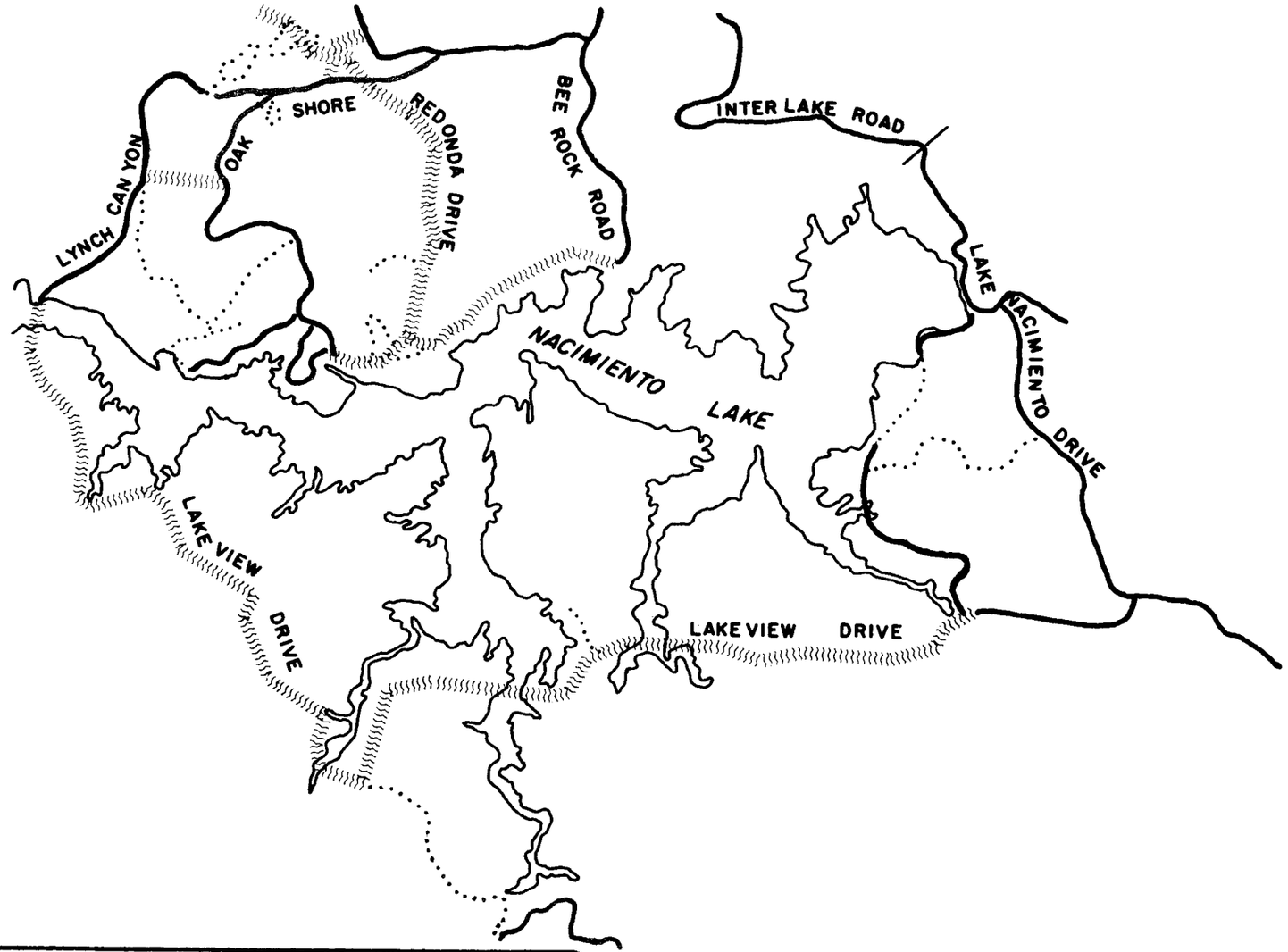
	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS	———	
ARTERIALS	———	|||||||||||||||||
COLLECTORS	———	|||||||||||||||||
APPROX. URBAN BOUNDARIES	▒▒▒	
SEPARATE GRADE CROSSING	○	

CIRCULATION PLAN

COUNTY-WIDE RURAL AREAS

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGAWAY

FIGURE 1



LEGEND

	CONSTRUCTED	UNCONSTRUCTED
URBAN ARTERIALS	———	//////////
LOCAL ARTERIALS		
COLLECTORS	———	. . . . .

CIRCULATION PLAN

NACIMIENTO PLANNING AREA

FIGURE 2

PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

Los Osos Valley Road - Pecho Road to U.S. 101

One of the highest growth areas in the County is Los Osos/ Baywood Park. At the present time the character of the development here is residential, and the potential exists for considerable growth pressures, particularly of the bedroom community type of development oriented towards San Luis Obispo. Overall traffic growth is such that volumes on Los Osos Valley Road will increase by 1995 from the present 10,000 vehicles per day to around 18,000 vehicles per day. Nearly all this traffic is destined for San Luis Obispo and only a small percentage is traveling south along 101 or north to Atascadero and Paso Robles.

The existing two-lane facility will be insufficient to carry this volume of traffic. Already with the 10,000 vehicles per day, safety problems are noticeable because of the marginal level of service at this traffic volume. It will be necessary, ultimately, to increase this road to four lanes, provide adequate median turn lanes for points of access, and to control access from fronting properties. This will not only alleviate future deficiencies but will provide the desirable level of safety for the various access points along the road.

It is recommended that the existing road be rebuilt with Class II bicycle lanes (minimum 4-foot width) and shoulders providing an adequate interim level of service as a predecessor to the four-lane road. It is further recommended that this section be rebuilt in such a manner that the reconstructed portion would serve as one-half the ultimate four-lane facility. Extensive car-pooling and a South-Bay-SLO transit link could significantly reduce peak volumes and extend the time this interim improvement level would suffice.

Highway 227 - San Luis Obispo to Arroyo Grande

Despite the slightly shorter distance in traveling between San Luis Obispo and Arroyo Grande by Highway 227, gradients and curvature on some sections means that the journey is slower, and hence most traffic from these two cities use Highway 101. However, with high volumes on Highway 101, particularly during the peak hours, there will be a tendency in the future for this highway to act as a bypass. This is particularly true for traffic commuting from the northern parts of San Luis Obispo (near the airport or north of the airport in the expanding industrial areas along Highway 227). Future improvements made to Highway 227 should be coordinated with the City of San Luis Obispo proposals.

Forecasts show the traffic increasing from the present level of 3350 vehicles per day to a 1995 level of 6000 vehicles per day, assuming only a minimum of diversion. While this is still within the physical capacity it will show a marginal level of service through the hilly sections and some upgrading will be needed to improve the safety and capacity along these portions.

It is recommended that Highway 227 be reconstructed to current standards between the Town of Edna and the City of Arroyo Grande. The reconstruction should take place as much as possible within the existing right-of-way. The improvement should consist of two lanes of improved alignment which would increase speed, driving convenience, and safety.

Prior to that construction, it is recommended that Highway 227 be extended southerly to bypass the City of Arroyo Grande and tie into a proposed interchange at Highway 101 southerly of the northbound off-ramp to Traffic Way. This improvement will remove recreational traffic bound for the Lopez Recreation Area that presently use Branch Street. It is further recommended that the north and south bound ramp at Traffic Way be incorporated into the proposed interchange.

Countywide Circulation Plan

The previous recommendations outlined are those anticipated for the first twenty years of the planning period. The total Countywide circulation needs are graphically shown in Figure 1. This plan is intended to picture the ultimate County highway transportation system as can best be estimated today.

NORTH COAST/ESTERO PLANNING AREA

The City of Morro Bay presently forms the major center of activity in the North Coast/Estero Planning Area. Cambria and Cayucos to the north and Baywood/Los Osos to the south, constitute significant communities in the area. While Cambria and Baywood/Los Osos are maintaining their relative separation as urban communities, the Morro Bay - Cayucos corridor is gradually becoming a continuous urban area.

The environmental setting presents a number of sensitive natural areas. The marsh and mudflat areas of Morro Bay, the sand dunes of Morro Beach, the peninsula and Morro Rock itself are critical wildlife and vegetation zones. Morro Rock, the peninsula, and Eto and Warden Lakes are unique scenic features.

Travel in the area is characterized by high seasonal peaks. The San Simeon Hearst Castle north of Cambria and the entire coastal region is a major attraction for tourists during the summer months.

There are no major employment centers in Cambria in the north, or Baywood/Los Osos to the south. Consequently, these communities depend on other parts of the County for employment and to a lesser extent, shopping, and personal services. Specifically, Morro Bay is a center for goods and services and San Luis Obispo for employment opportunities. There are several major shopping areas in Morro Bay as well as a number of restaurants concentrated along the Embarcadero and Central Business District. Los Osos, Morro Bay, Baywood Park and Cambria support neighborhood commercial centers and Cayucos has a small community shopping center.

Population in the area is expected increase greatly over the next twenty years. Employment is also expected to increase, although for a large proportion of residents, San Luis Obispo will continue to be the major employment center. The resulting travel demands are heavily concentrated along Highway 1 corridor between Cambria and San Luis Obispo and along the Los Osos Valley corridor.

Needs and Deficiencies

The deficiency analysis showed that the Highway 1 coastal corridor between Morro Bay and Cayucos will be operating at a marginal level of service by 1995. The major deficiencies which occur (some of which are already apparent) are largely related to the access from neighborhoods along this corridor. The situation is particularly acute in north Morro Bay.

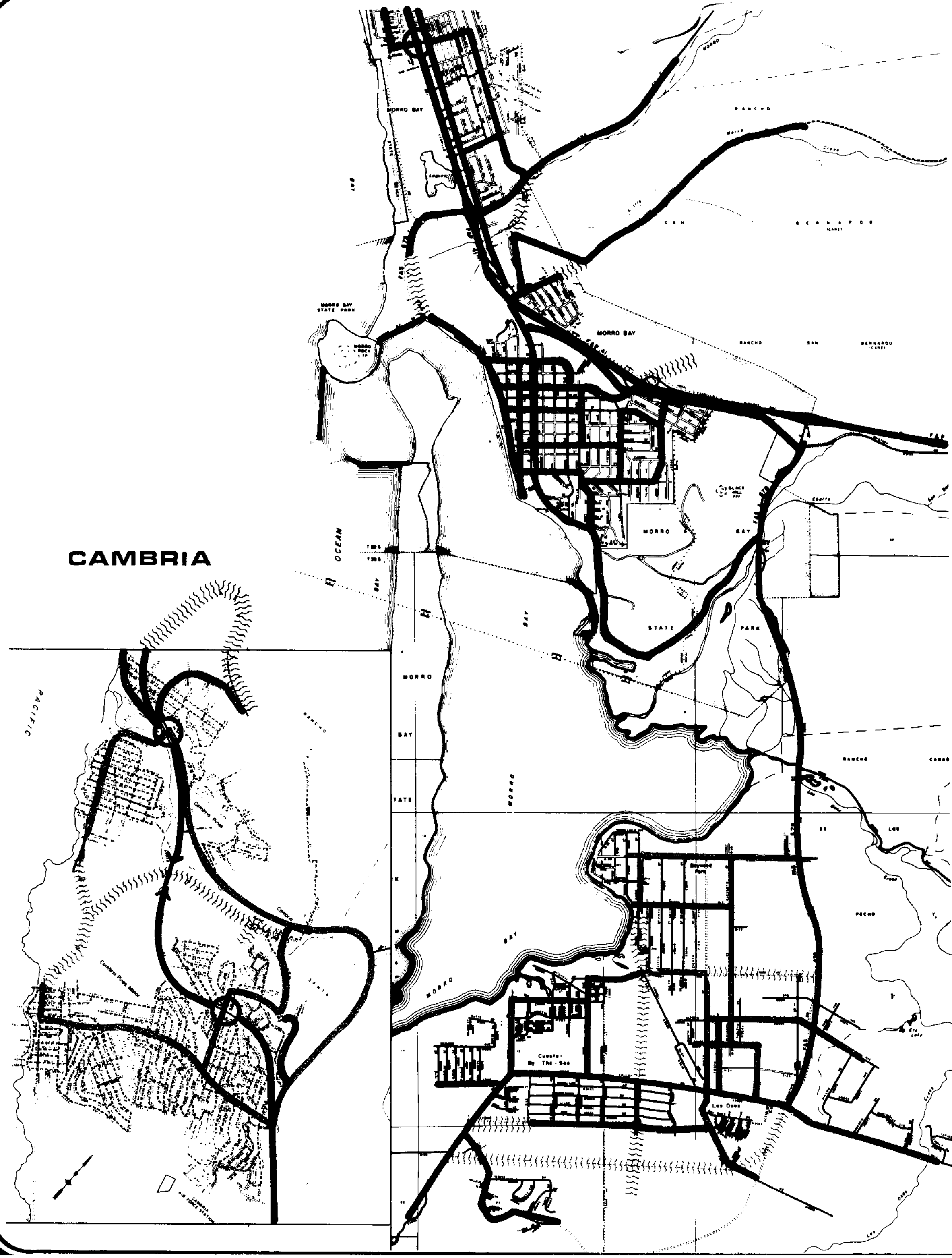
This plan for the north coast section of Highway 1 provides for signalized intersections, and, in the long term, reduction on the number of access points by construction of grade-separated interchanges to provide access to Highway 1 corridor. No serious capacity deficiencies are predicted to occur in the 20-year planning period. While the level of service will be less than desirable during the summer peaks, the widening of Highway 1 based on these peaks is not recommended.

Recommended Improvements

The recommended highway plan for the North Coast/Estero Planning Area is illustrated in Figure 3 and 4. Some of the principal recommendations are discussed below.

In the southern part of the planning area, there is a new alignment of South Bay Boulevard extending to Los Osos Valley Road. This new facility carries most of the traffic between Morro Bay and the two residential communities of Cuesta-by-the-Sea and Los Osos. Consequently, traffic is diverted from Eleventh Street and parallels residential facilities. South Bay Boulevard will eventually extend to Pecho Road from Los Osos Valley Road providing an alternate route to Montana de Oro State Park. This extension would be a controlled access local arterial.

In order to provide adequate circulation and parking facilities for the Baywood Park business district, Third Street, between Santa Ysabel Avenue and Ramona Avenue will be designated a local arterial. This



LEGEND

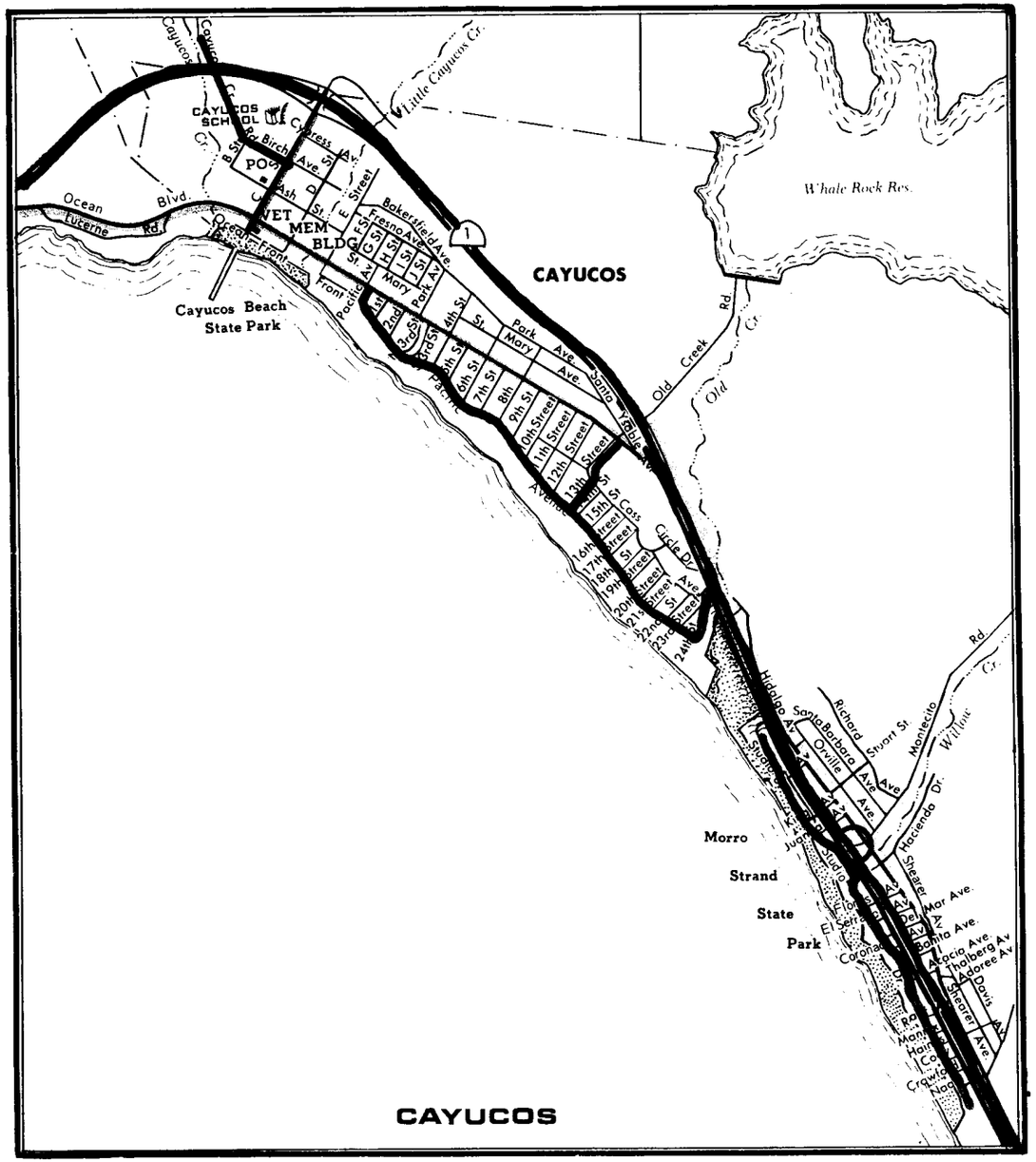
	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS		
URBAN ARTERIALS		
LOCAL ARTERIALS		
COLLECTORS		
BRIDGE		
SEPARATE GRADE CROSSING		

CIRCULATION PLAN

NORTH COAST - ESTERO PLANNING AREA

FIGURE 3

PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY



LEGEND

	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS	———	
URBAN ARTERIALS		
LOCAL ARTERIALS		
COLLECTORS	———	//////////
SEPARATE GRADE CROSSING	○	

CIRCULATION PLAN

NORTH COAST - ESTERO PLANNING AREA

FIGURE 4

PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

will make 3rd Street the main north/south arterial on the western edge of Baywood Park enabling 2nd Street to develop as a limited traffic/pedestrian oriented street with the appropriate urban design criteria.

Another area of special concern in the North Coastal/ Estero Planning District is Windsor Boulevard in Cambria. A proposed local arterial status is recommended to connect the north and south sections of Windsor Boulevard to provide adequate circulation and access when the Ranch property is developed, and the existing adjacent residential areas experience additional infilling. The road will be designed in such a manner as to discourage through traffic and non-residents. This should be provided for in the development plans.

The Fiscalinni Ranch property is a large portion of the North Coast area of Cambria that, when development occurs, will require an additional east/west link and crossing at Highway One. This proposal is shown on the Circulation Plan for North Coast - Estero Planning Area, Figure 3. The developer of the property, working in conjunction with the County Planning and Engineering Departments and Caltrans, would be required to do extensive studies and incur all costs for construction of this crossing.

The three communities of Baywood Park, Cuesta-by-the-Sea and Los Osos have relatively high population growth projections. As a result the travel between Morro Bay and San Luis Obispo is expected to increase significantly as will local traffic between these residential communities. Los Osos Valley Road must undergo major improvements to accommodate the traffic growth, as was described in the previous section of regional corridors.

North Coast/Estero Circulation Plan

The previous recommendations outlined are for improvements needed during the first twenty years of the planning period. The comprehensive North Coast/Estero Circulation plans are shown on Figures 3 and 4.

SALINAS RIVER PLANNING AREA

Paso Robles

Discussion and graphic representation of this area have been included only to maintain consistency between County roads and the recommended improvements to roads within the city limits of Paso Robles.

The major recommended improvements to County roads in the Paso Robles vicinity include a westerly extension of Niblick Road across the Salinas River, Highway 101, and the Southern Pacific Railroad tracks to Spring Street. In order to be effective, this proposed alignment must be connected to Highway 101 by means of a full interchange.

Also, Highway 46 in this area will be expanded to four lanes. This four lane cross-section will extend from east of Cholame to Paso Robles providing a major thoroughfare for travel in this section of the County.

Atascadero

The Atascadero Area is essentially a low-density residential community of about 14,510 population which is expected to increase to 21,220 by 1995. The commercial area of this relatively recently developed, unincorporated community is centered around the historic Veteran's Memorial Building and a community park. Neighborhood commercial centers are located to the south, west, and east along the highway and especially El Camino Real. In addition, there is some heavy commercial activity along the north-south corridor. The Atascadero State Hospital, a major public facility and employment center is at the south edge of the community.

Steep ridge lands ring the area with the foothills of the La Panza Range on the east, Santa Lucia Range on the west and the steep slopes of Pine Mountain south of town. Prime agricultural lands abound east of town.

The original 1914 Atascadero Colony road system was designed for the automobile as the primary mode of transportation, but without recognition of their dominance in today's lifestyle. The original streets were laid out with a 40 foot right-of-way, substandard to the current standard for even minor streets.

Major revisions have recently occurred through the efforts of the Atascadero Advisory Committee and the County Planning Department. The Circulation Plan for Atascadero now meets the standards as outlined by the County Engineering Department.

Needs and Deficiencies

Atascadero's circulation system shows few serious deficiencies for 1995. The planned street system allows a well dispersed traffic flow with only a few corridors where traffic flow is concentrated. The major deficiencies identified were along the Highway 41 corridor, particularly in the El Camino Real and Capistrano Avenue sections.

In addition to these capacity deficiencies, there are various needs relating to better safety and circulation for cars, cyclists and pedestrians.

Recommended Improvements

A new river crossing with a provision of a railroad grade separation should be incorporated with the realignment of Highway 41. As part of the functional design, an attempt should be made to provide a connection to Sycamore Road. In order to justify this expenditure, it will be necessary to improve the remaining portion of Highway 41 between the Salinas River and Shandon. This improvement will divert a significant portion of traffic from the valley, bound for the South Coast-San Luis Obispo recreational areas. Diverting this traffic will thus reduce the volumes between Paso Robles and Shandon, and may delay providing the full improvements.

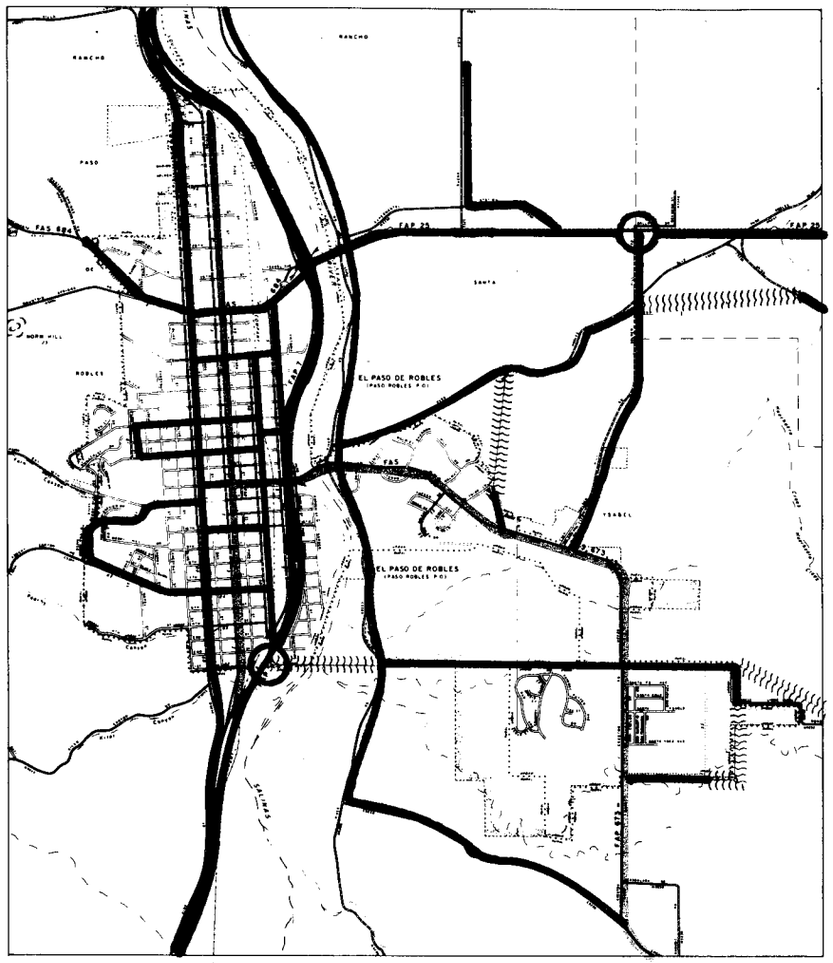
Another recommended improvement is to construct the Lewis Avenue extension southerly of Lewis Avenue over the Atascadero Creek to connect with the recommended State Highway 41 realignment. This improvement will somewhat reduce traffic volumes on El Camino Real. However, it is necessary to point out that this proposed extension will turn Lewis Avenue into a through street and thereby place a significant amount of traffic adjacent to Lewis Avenue School and its parking facilities. As part of the functional design, consideration should be given to protecting the school from the increased traffic. As part of this project, it will be necessary to install a traffic signal at the intersection of Lewis Avenue and W. Mall.

A new bridge is recommended over the Atascadero Creek at Curbaril Avenue. As part of this project, Curbaril Avenue should be reconstructed to present day standards between Morro Road and Portola Road.

Traffic volumes along El Camino Real have reached the point that justifies four lanes through most of the community. It is recommended that El Camino Real be reconstructed as needed to four lanes from San Rafael Avenue to San Anselmo interchange.

SALINAS RIVER CIRCULATION PLAN

The previous recommendations outlined are those anticipated for the first twenty years of the planning period. The Salinas River Circulation needs are graphically shown in Figures 5 and 6. This plan is intended to picture the ultimate Salinas River highway transportation system as can best be estimated today.



PASO ROBLES

LEGEND

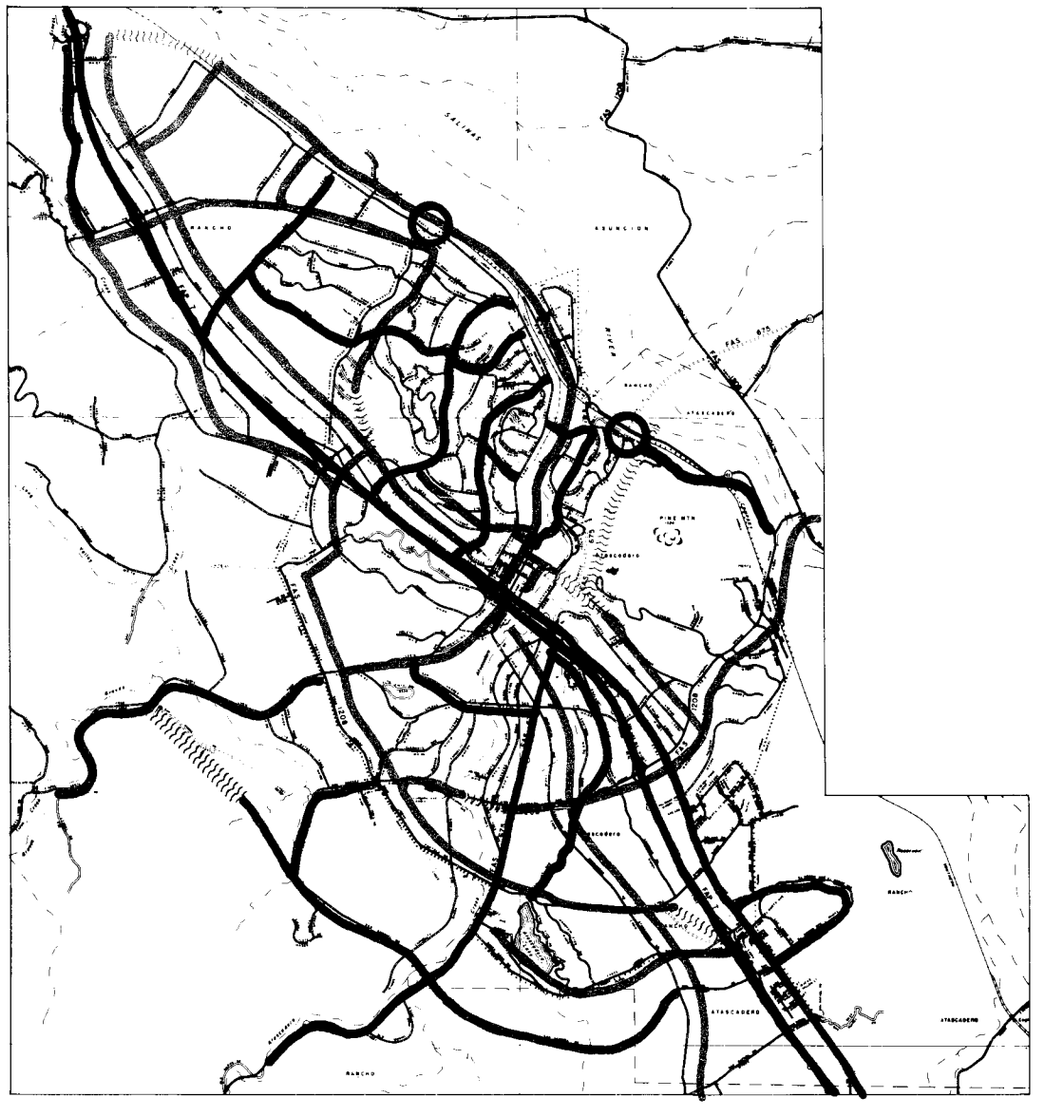
	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS	———	
URBAN ARTERIALS	———	
LOCAL ARTERIALS	———	
COLLECTORS	———	//////////
SEPARATE GRADE CROSSING	○	

CIRCULATION PLAN

SALINAS RIVER PLANNING AREA

FIGURE 5

PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY



ATASCADERO

LEGEND

	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS	———	
URBAN ARTERIALS	———	
LOCAL ARTERIALS	———	~~~~~
COLLECTORS	———	~~~~~
SEPARATE GRADE CROSSING		O

CIRCULATION PLAN

SALINAS VALLEY PLANNING AREA

FIGURE 6

PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

SAN LUIS OBISPO PLANNING AREA

The City of San Luis Obispo is and will continue to be the center of activity for the County. With the County seat of government, State and Federal agencies, California Polytechnical State University, and the accompanying population serving employment, the City has a large proportion of the employment in the County. Only in the South Coast planning areas is its influence somewhat lessened by the effect of Santa Maria just south of the County boundary.

The urban areas are shown graphically only to maintain coordination with the County Areas and reflect regional proposals. Any reference made to the incorporated areas in the text is made in this context.

The major recommended improvements to County areas in the San Luis Obispo Planning Area are the access corridors to the City from the northwest and west, particularly from Highway 1 and Los Osos Valley Road and the proposed Highway 1 bypass over O'Connor Way.

The deficiency analysis for San Luis Obispo revealed serious access and distribution problems in 1995 in these two areas. Traffic from Highway 1 enters the City along Santa Rosa Street, and a considerable proportion of Los Osos Valley Road traffic adds to this by way of Foothill Boulevard. A total of 47,000 vehicles per day will require access into or out of the City from these two corridors, 42,000 of which will be centered along Santa Rosa Street. Add to this the 30,000 vehicles per day generated in 1995 by development north of Foothill Boulevard and there is a total traffic load of around 70,000 vehicles per day to be shared between Broad Street, Chorro Street, Santa Rosa Street, and California Boulevard.

With these growth forecasts in this corridor and the corresponding high growth in the southern areas of the City, the demand which will be placed on access into and through the City from Highway 1 corridor will far exceed the existing capacity.

To the south, the highest traffic loads are on Highway 227 and Madonna Road. Highway 227 from High Street to Tank Farm Road has been expanded to four lanes and the remainder of the project from Tank Farm Road to the community of Edna to two lanes. In addition, traffic signals at Orcutt Road and a railroad grade separation in the vicinity of the Los Ranchos School have been constructed.

Issues and Alternatives

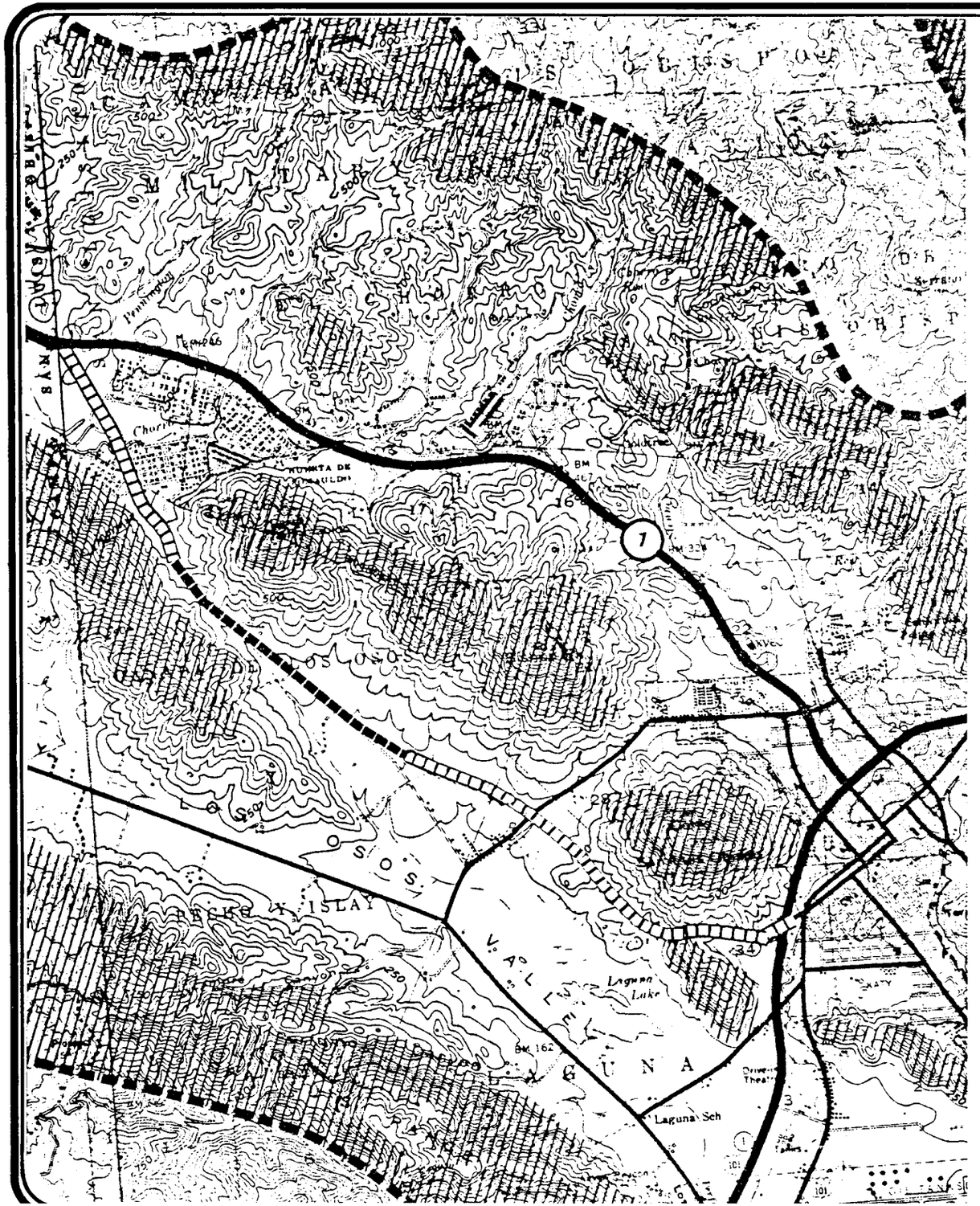
The new alignment of Highway 1 has been a controversial issue throughout the County since its first proposal many years ago. Various alternatives have been suggested and pursued. A public opinion survey taken by the City of San Luis Obispo in 1975 showed that 37% of those polled preferred a proposed Los Osos Valley to Cuesta College route following O'Connor Way for the new alignment of Highway 1.

This concept was proposed several years ago and opposed by the City of San Luis Obispo. The alternative proposed for study by this plan include a scenic highway rather than a freeway, requiring considerably less space and less visual intrusion. In addition, to minimize the visual impact on the scenic quality of the Morros and the surrounding areas, the existing alignment of O'Connor Way would be used along much of it's length.

With mitigating measures such as discussed in the next section, this alternative is preferable when all traffic and environmental aspects are fully evaluated. With the cross town distribution system recommended under this alternative the plan offers the most effective traffic solution and with the type of facilty proposed causes less severe environmental impact than the other alternatives.

Recommended Improvements

The recommended plan, as shown in Figure 7, serves the heavy travel demand on Highway 1 corridor by providing a bypass of Highway 1. Part of the bypass will utilize O'Connor Way and new sections will be constructed to connect with Highway 1 and Highway 101.



LEGEND

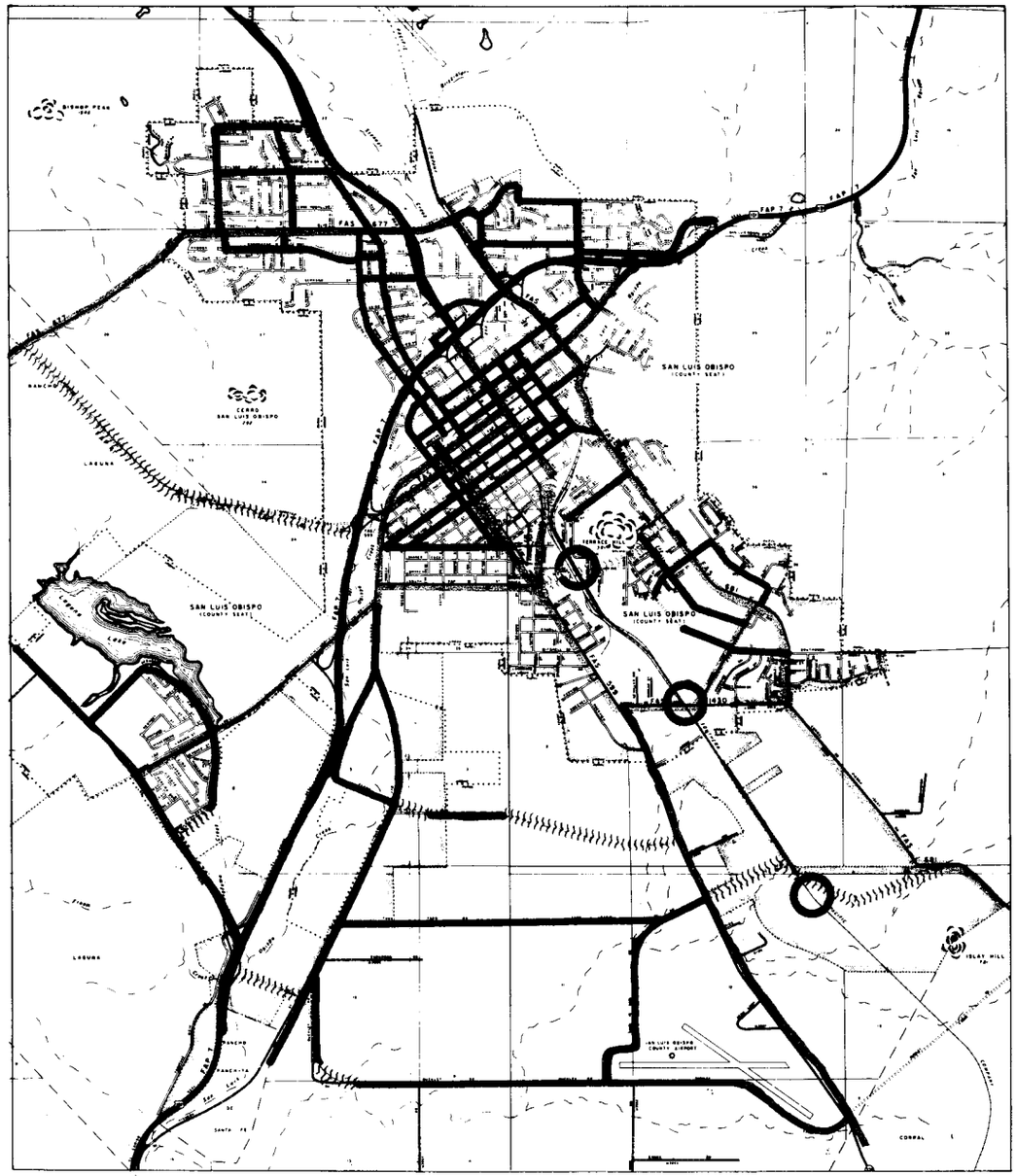
- NEW ALIGNMENT
- MAJOR IMPROVEMENT
- SLOPE OVER 30%

CIRCULATION ELEMENT

WESTERN ACCESS ROAD

PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGAWAY

FIGURE
7



LEGEND

	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS	———	
URBAN ARTERIALS	———	//////////
LOCAL ARTERIALS		
COLLECTORS	———	//////////
SEPARATE GRADE CROSSING	○	

CIRCULATION PLAN

SAN LUIS OBISPO PLANNING AREA

FIGURE 8

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

The road should have limited access (through purchase of access rights) and have a grade line that will blend into the surrounding contours. Figure 7 shows a general alignment offering minimum visual intrusion.

The only grade separation will be at the Highway 1 and Highway 101 interchanges. At Foothill Boulevard, a signalized at-grade intersection will be provided.

This new western access road will provide an access point to the City of San Luis Obispo, at the Higuera Street, Marsh Street one-way couplet. It will also interconnect with Highway 101 to provide northbound and southbound access.

San Luis Obispo Circulation Plan

The previous recommendations outlined are those anticipated for the first twenty years of the planning period The San Luis Circulation needs are graphically shown in Figure 8. This plan is intended to picture the ultimate San Luis Obispo highway transportation system as can best be estimated today.

SOUTH COUNTY PLANNING AREA

The urban portion of the South County Planning Area, includes the three incorporated cities of Pismo Beach, Grover City, and Arroyo Grande and the unincorporated community of Oceano. The planning area also includes Avila Beach to the north and Nipomo to the south.

The coastal ridge forms a backdrop for all beach areas from Pismo Beach to south of Oceano. One unique feature of this area is the expansive sand dune range south of Oceano. Also of primary concern are the flood-plain areas adjacent to Pismo Creek and Arroyo Grande Creek and the prime agricultural soils south of Oceano and Arroyo Grande.

The three cities are changing in character from a predominantly recreational to almost suburban bedroom type communities. In Pismo Beach, tourism is a substantial part of its commercial activity, as it is to a lesser extent in Avila Beach. A large proportion of the population commutes to San Luis Obispo or Santa Maria for jobs.

Relatively large growth is expected, with the population increasing from about 39,000 at present to 55,600 in 1995. Arroyo Grande, in particular, has considerable growth potential. This growth would substantially increase the usage of present circulation facilities. It is suggested therefore, that studies be conducted to determine alternate alignments for traffic generated by these developments.

The urban areas are shown graphically only to maintain coordination with the County areas and reflecting regional proposals. Any reference made to the incorporated areas in the text is made in this context only.

The major level of service deficiencies are centered about Highway 1. While the deficiencies are not severe under the baseline growth assumptions, this planning area will need continual monitoring because of its high growth potential. The deficiency analysis for the major streets in urban areas also showed environmental capacity problems as the thresholds of acceptability in adjoining land uses will be exceeded on some streets by 1995. These included Highway 101, the residential and institutional areas along Halcyon Road and Highway 227.

Issues and Alternatives

One of the key transportation issues addressed in the plan development work was the type of facilities needed to serve future growth in Arroyo Grande. A major proposal affects County areas southeast of Oceano. This is the proposed alignment connecting Highway 1 southeast of Oceano to an interchange at Highway 101 southerly of Traffic Way, and then to proceed northeasterly and tie in with State Highway 227 in the vicinity of Huasna Road. This recommendation has been made

before and received objections from local residents, some of the objections being growth inducement and environmental concerns. This is a long-range proposal and the land in the interim should be retained as agriculture use.

Another issue which should be mentioned in the South County Planning Area is access to the beach areas. Large numbers of visitors are attracted to the beach facilities every year and capacity deficiencies are created, particularly on holiday weekends. The question of beach usage and beach access as well as further State Park Beach development in the South County are continuing issues and the outcome could significantly affect those elements of the plan. A special review should therefore be made of this question in the resolution of these issues.

Recommended Improvements

The main highway improvements recommended for the South County Planning Area are discussed below.

The Highway 227 bypass as discussed in the Countywide Highway section is recommended for implementation. Also a detailed study needs to be made of all freeway ramps and structures along Highway 101 from Los Berros interchange northerly to Shell Beach. The study should include future, as well as existing, locations and how they relate to local traffic circulation.

Major freeway improvements are proposed at two locations in Nipomo in conjunction with detailed proposals. Evaluation should also be given to provide an alternative link, extending one of these connections easterly to Thompson Avenue.

South County Circulation Plan

The previous recommendations outlined are those anticipated for the first twenty years of the planning period. The South Coast circulation needs are graphically shown in Figures 9 and 10. This plan is intended to picture the ultimate South County highway transportation system as can best be estimated today.

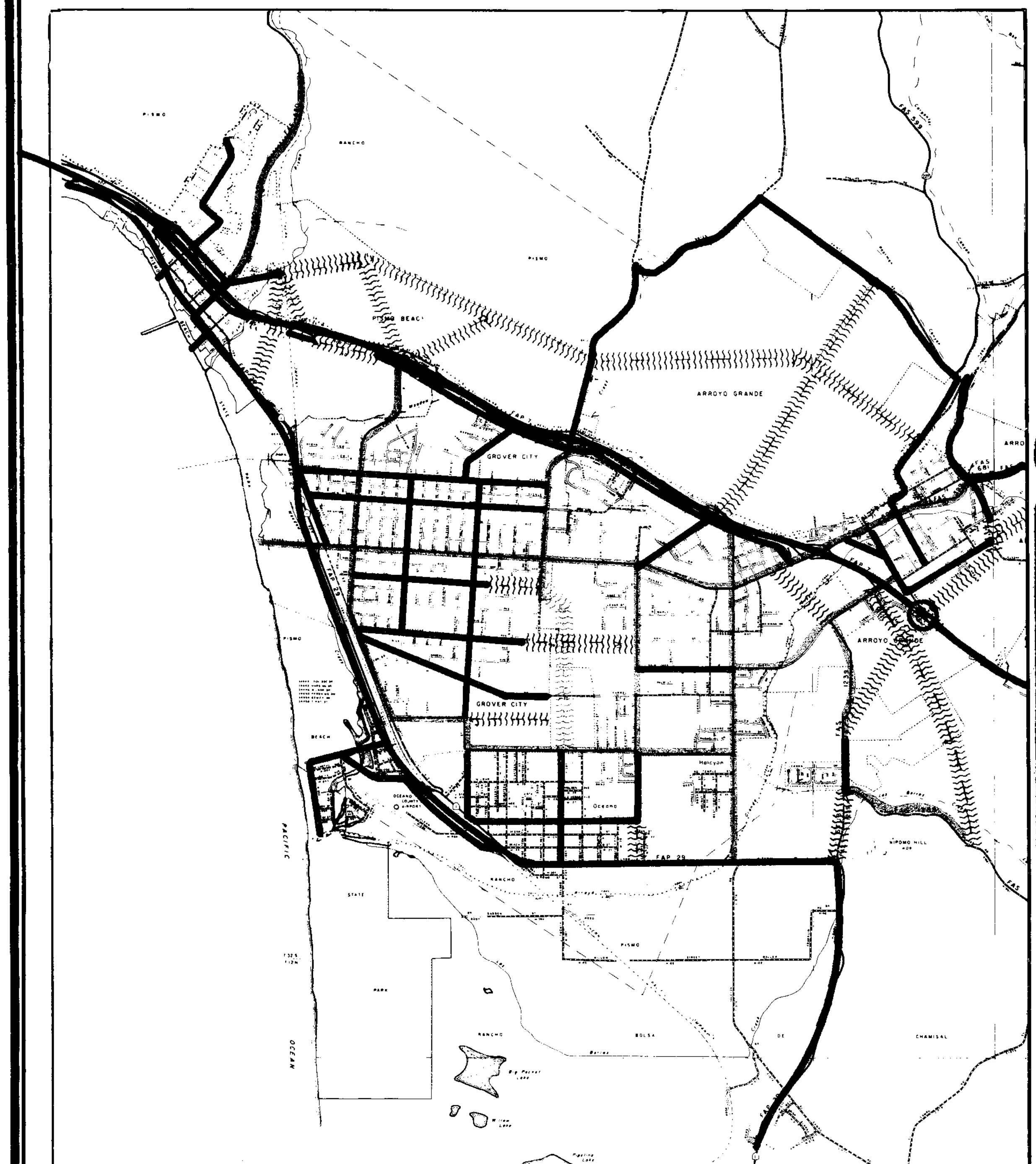
IMPLEMENTATION

The largest revenue gap in the transportation program relates to the Highway Element. This gap is comprised of monies to be used primarily in improving and expanding the existing system. Nevertheless, even if there were no need for capacity-related expansion of the system, the need for additional maintenance funds would remain. If no additional money is available then the system cannot expand and it will not long remain in a state of repair.

Various possible funding alternatives exist for financing the recommended highway improvements. Some require direct sources of new funds while others would just modify existing programs through changes in the tax rate of the distribution formulas.

One large source of funds would be the State gas tax, since the greatest source deficit lies in the gas tax funding category. The next significant gap occurs on the local level where money is generated from general funds including building permit taxes, fines and forfeitures. The revenue deficit for the Federal Aid monies is smaller than that for the local road and highway system, yet about $2.0 million per year over the first 4 years must be found to maintain and upgrade the quality of the County's Federal aid system.

Since gas tax has been identified locally as one of the most equitable sources of future revenue, it has been reviewed to determine the amount of tax increase which would make up the added revenues. A review of gas tax requirements indicates that about $100 million additional will be needed by cities and the County over the planning period. This would require a doubling of the current State gasoline tax. An advantage of the gas tax is that the users of the roadway pay taxes on the facilities that they use. It is therefore recommended that the County provide active support for instituting an increase in State gasoline taxes.



LEGEND

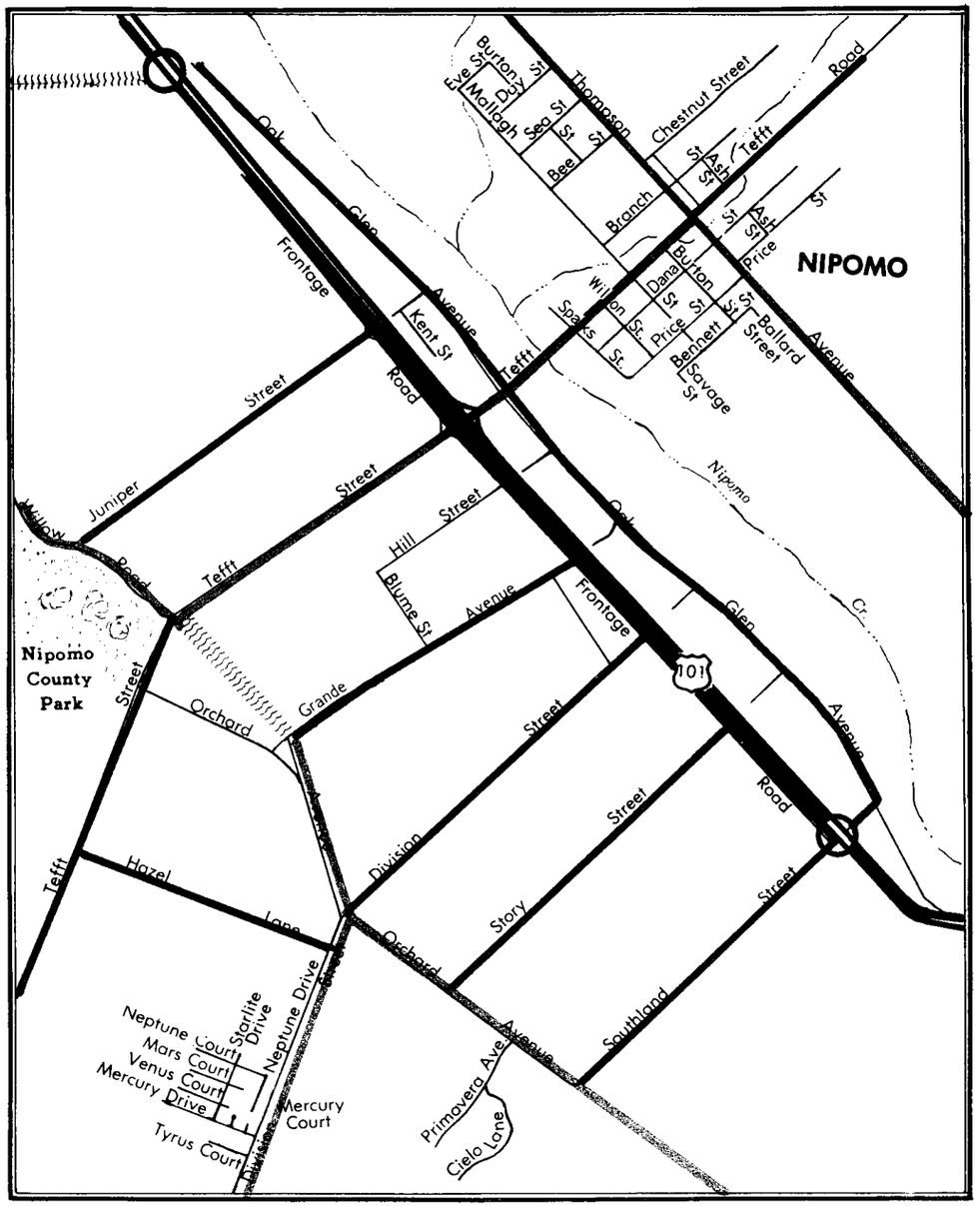
	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS	━━━	
URBAN ARTERIALS	━━━	
LOCAL ARTERIALS	┅┅┅	┅┅┅
COLLECTORS	━━━	⦚⦚⦚
SEPARATE GRADE CROSSING		○

CIRCULATION PLAN

SOUTH COUNTY PLANNING AREA

FIGURE 9

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY



NIPOMO

LEGEND

	CONSTRUCTED	UNCONSTRUCTED
PRINCIPAL ARTERIALS	———	
URBAN ARTERIALS		ssssssssssssssssssss
LOCAL ARTERIALS	———	ssssssssssssssssssss
COLLECTORS	———	ssssssssssssssssssss
SEPARATE GRADE CROSSING	O	

CIRCULATION PLAN

SOUTH COUNTY PLANNING AREA

FIGURE 10

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

There are three major categories of revenues which can be used for financing highways. These include:

Federal Aid - including Federal Aid urban, Federal Aid primary, and Federal Aid secondary.

Gasoline Tax - all gasoline tax money grouped irrespective of State, County, or local proportions.

Other Funds - including general fund, license fees, street and road taxes, fines and forfeitures, bond proceeds, sales taxes, and any other local funds generated or State or Federal subventions to local agencies.

Other ways of implementing the Circulation Plan include 1) imposing conditions of development on a builder which could include the paving of the road and the placement of curb and gutter in front of the development 2) through a Resource Management program which would set capacity limts for circulation systems in a given area and 3) tax on building permit fees to be used for road improvements.

Summary of Recommendations

The following is a summary of the principal recommendations for the highway system during the planning period.

COUNTY-WIDE CIRCULATION PLAN

- Widen Highway 46 to four lanes between east of Cholame and Paso Robles, with minor improvements on Highway 41 and Highway 46 to the Kern County Line.

- Upgrade Highway 41 between Morro Bay and the Kern county Line.

- Improve the intersections along Highway 1 to provide adequate safety and access to Cambria.

- Reconstruct Highway 1 from the Santa Barbara County Line to Oceano, with a new link connecting to Highway 101 immediately south of Arroyo Grande.

- Improve Lake Nacimiento Drive from Paso Robles to the Lake.

- Widen Los Osos Valley Road between Pecho Road and Perfumo Canyon Road to four lanes.

- Study possible realignment of Highway 1 around San Luis Obispo to provide traffic relief for congestion and safety when conditions become intolerable along Santa Rosa Street.

- Provide Highway 227 bypass of the central business district of Arroyo Grande.

- Provide various Highway 101 improvements including ramp and climbing lane modifications.

NORTH COAST/ESTERO PLANNING AREA:

- Provide access to Highway 1 in Cambria and north Morro Bay by the construction of interchanges.

- Improve Ardath Drive with an improved connection to Windsor Boulevard in conjunction with development projects. Concurrently, provide for additional access to Highway 1.

- Join the northern and southern sections of Windsor Boulevard in Cambria.

- Extend Ramona easterly to link with South Bay Boulevard.

- Improve Pecho Road southerly from Los Osos to the State Park boundaries.

SALINAS RIVER PLANNING AREA

- Widen El Camino Real in Atascadero to four lanes, as needed, from San Rafael to San Anselmo.

- Construct a new alignment of Highway 41 in Atascadero between El Camino Real and easterly of the Salinas River.

- Realign curves at Ardilla, San Anselmo, and Portola Roads in Atascadero.

- Improve Highway 41 between Atascadero and Morro Bay.

- Provide extension of Curbaril Avenue over Atascadero Creek in Atascadero.

SAN LUIS OBISPO PLANNING AREA:

- Study the creation of a new western access road between Highway 1 near Cuesta College to Highway 101 with connections at Higuera Street and Marsh Street. The roadway will be the reconstruction of O'Connor Way and a new road between O'Connor Way (just north of Foothill Boulevard) and Highway 101.

SOUTH COAST PLANNING AREA:

- Widen Highway 1 from Grand Avenue to Pismo Creek.

- Carry out special studies to seek ways of reducing peak hour volumes on the heavily travelled sections of Highway 1 and Highway 101. These could include measures such as carpooling incentives and staggered work hours.

- Review beach access needs when future beach use policies are finalized.

BIKEWAYS ELEMENT

BIKEWAYS ELEMENT

INTRODUCTION

Although not a State-mandated element of the General Plan, a Bikeways Element is an important part of the County Transportation Plan. Bikes provide an important alternative to constantly using the automobile to get from point A to point B. They are cheaper to operate than cars, much less energy-consumptive and provide a healthy and enjoyable means of exercise.

It is well documented that bicycles are being used at an increasing rate. Cycling has been around far longer than the automobile. In the ensuing years since the automobile, a great network of roads, streets and highways have been built to accommodate the automobile with only marginal provisions for bicycle use. However, changes are taking place. This is reflected in increasing public pressures for pathways and routes where bicycles can be ridden in relative safety. The emphasis of this element is towards providing such bicycle facilities. As a result of increasing needs and State legislation requiring alternate modes of transportation to be considered, the Board of Supervisors in December, 1972, initiated a Bicycle Advisory Committee to give technical assistance in the preparation of a Regional Bikeway Plan from which this County Bikeway Element has been abstracted.

THE PURPOSE

The purpose of the Bikeway Element is to provide San Luis Obispo County with a comprehensive long term plan to guide the development of bicycle routes, trails and related facilities. This is necessary to keep pace with the existing and future demands for bicycle facilities, as well as to provide a foundation for sound economic transportation and recreation facilities in San Luis Obispo.

This plan is the Bikeway Element portion of the County Transportation Plan as provided for in Section 65303 of the State of California Government Code and also SB 265 as chaptered in the Public Resources Code. Hereinafter it shall be known as the San Luis Obispo County Bikeway Element.

OBJECTIVES

The objective of this element is to serve as a guide to governmental agencies and private developers, to meet the following cyclist goals:

1. To provide an avenue for the County to commit itself to develop a recreation and transportation system throughout the unincorporated rural and urban areas, and to coordinate with the incorporated cities and the State for the linking of community and County bikeways to create a bikeway system for the County.

2. To offically encourage the use of bicycles as a pleasant means of travel and recreation embodying physical, environmental, economic, safety, convenience, and social benefits.

3. To provide the related facilities and services necessary to encourage bicycle travel to assume a significant role as a form of transportation and recreation.

4. To increase the efficiency of facilities for the cyclist, as well as to lessen or eliminate the cyclist's conflict with the motorists for the use of the streets and highways of the County.

5. To insure that bikeways be included in the design of all new or reconstructed streets, recreational areas, or other projects where their use would further the goals of the Bikeway Element.

THE CONCEPT

This plan has been prepared to serve as a guide for all levels of government and private citizens as an indication of the need for bicycle trails and related facilities in San Luis Obispo County. The Bikeway Element envisions a long-range program to provide a bicycle travel system integrated with pedestrian and motorized transit systems. As a means of transportation, the bicycle can offer an opportunity for greater maximization of land usage, and serve as a useful adjunct to other forms of transportation and recreation.

Personal mobility is increasing each year and as more and better highways are constructed and as new methods of transportation are created, or existing methods, such as bikeways, improved mobility for recreational purposes is expected to increase proportionately.

ISSUES AND CONFLICTS

It is estimated that one out of three persons in the United States is a bicycle rider. If this estimate holds true for San Luis Obispo County, there are approximately 47,500 persons who, at one time or another are competing with the automobile for riding space on existing roadways.

Whether bicycles ever become a major mode used for short transportation or not, there is still a large percentage of our population that currently rides bikes and therefore needs more improved facilities.

The need for bikeway facilities are based upon two fundamentals: Of safety and quality of life. Presently there exists a definite hazard for the bicyclist. Every year conflicts between motorists and bicycles cause a needless number of deaths and injuries. Also, the County is endowed with a combination of unique and varied natural resources. It is therefore proper to assume that recreation is a significant industry for tourists as well as for the quality of life of its residents.

The Bikeway Element concept as proposed has been designed to satisfy the above-mentioned planning premise.

BIKEWAY PHYSICAL DESIGN CRITERIA

It is necessary to evaluate both transportation and recreation planning needs in order to determine the proper scale of development and investment for bicycle facilities. Without comprehensive planning, actions taken to provide facilities for bicycles are likely to be piecemeal and ineffective.

This Element is important to the systematic development of bicycle facilities. The Bikeway Element designates routes for various bikeway types to insure continuity of routes through various jurisdictions and avoid costly duplication of facilities. The Element proposes three integrated networks of bikeways.

1. Regional recreation oriented routes that traverse recreation and open space area.

2. Countywide bicycle routes to recreation areas and other destination points of significance.

3. Bicycle routes on a local community scale.

The Element is modular, with each network introducing a different scale of effectiveness. The networks are regarded as sections of a total complex which should include all of them, but implementation of any route is not dependent upon completion of the large scale system, although combining all of the networks would certainly allow for optimum County participation.

TRAVEL CHARACTERISTICS

The generation of bicycle trips will vary according to the type of community, availability of facilities, income, weather conditions, and

other factors. Major generators of bicycle trips are schools, colleges and business areas, major employment centers, recreational facilities, points of interest and scenery.

Projections in the United States are for an increasing number of trips to be made by bicycles. It is possible that the bicycle is emerging as a potentially viable alternative mode of transportation.

It is estimated that the national average bicycle population ratio is one bicycle for every three people. Nearly all trips by bicycle are for recreational purposes or as an important means of transportation for children not old enough to drive. The Bicycle Institute of America reports that in 1969, 85% of all bike riders were children. In 1970, that figure dropped to 70%, and it has forecast a downward trend as more and more adults ride bicycles. As of 1978, children comprise 47% of all bike riders.

Before planning facilities for bicycles, it is necessary to understand the number and location of bicycles in the community as well as the number of cyclists in various age groups, and their desires.

DEFINITIONS

"Bikeway" means all facilities that provide primarily for bicycle travel. The following categories of bikeways are defined in Section 2373 of the Streets and Highways Code.

a) Class I Bikeway (Bike Path or Bike Trail).
Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrains with crossflows by motorists minimized.

(b) Class II Bikeway (Bike Lane)
Provides a restricted right-of-way designated for the exclusive or semi exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted.

(c) Class III Bikeway (Bike Route)
Provides a right-or-way designated by signs or permanent markings and shared with pedestrians or motorists.

The type of facility to select in meeting the bicycle need is dependent on many factors, but the following applications are the most common for each type:

Shared Roadway (no bikeway designation) - Most bicycle travel in the State now occurs on streets and highways without bikeway designations. This will probably be true in the future as well. In some instances, entire street systems may be fully adequate for safe and efficient bicycle travel and signing and striping for bicycle use may be unnecessary. In other cases, routes may be inherently unsafe for bicycle travel and it would be inappropriate to encourage additional bicycle travel by designating the routes as bikeways. Finally, routes may not be along high bicycle-demand corridors and it would be inappropriate to designate bikeways regardless of roadway conditions (e.g., on minor residential streets).

Many rural highways are used by touring bicyclists for intercity and recreational travel. In most cases, it would be inappropriate to designate the highways as bikeways because of the limited use and the lack of continuity with other bike routes. However, the development and maintenance of four-foot paved roadway shoulders with a standard four-inch edge stripe can significantly improve the safety and convenience for bicyclists and motorists along such routes.

Class I Bikeway (bike path) - Generally, bike paths should be used to serve corridors not served by streets and highway or where wide rights-of-way exist, permitting such facilities to be constructed away from the influence of parallel streets. Bike paths should offer opportunities not provided by the road system. They can either provide a recreational opportunity or, in some

instances, can serve as direct high-speed commute routes, if cross-flow by motor vehicles can be minimized. The most common applications are along rivers, ocean fronts, canals, utility rights-of-way, abandoned railroad rights-of-way, within college campuses, or within and between parks. There may also be situations where such facilities can be provided as part of planned developments. Another common application of Class I facilities is to close gaps to bicycle travel caused by construction of freeways, or because of the existence of natural barriers (rivers, mountains, etc.).

Class II Bikeway (bike lane) - Bike lanes are established along streets in corridors where there is significant bicycle demand, and where there are distinct needs that can be served by them. The purpose should be to improve conditions for bicyclists in the corridors. Bike lanes are intended to delineate the rights-of-way assigned to bicyclists and motorists and to provide for more predictable movements by each. But a more important reason for constructing bike lanes is to better accommodate bicyclists through corridors where insufficient room exists for safe bicycling on existing streets. This can be accomplished by reducing the number of lanes, or prohibiting parking on given streets in order to delineate bike lanes. In addition, other things can be done on bike lane streets to improve the situation for bicyclists, that might not be possible on all streets (e.g., improvements to the surface; augmented sweeping programs, special signal facilities, etc.). Generally, stripes alone will not measurably enhance bicycling.

If bicycle travel is to be controlled by delineation, special efforts should be made to assure that high levels of service are provided with these lanes.

Class III Bikeway (bike route) - Bike routes are shared facilities which serve either to: (1) provide continuity to other bicycle facilities (usually Class II bikeways); or (2) to designate preferred routes through high-demand corridors. As with bike lanes, designation of bike routes should indicate to bicyclists that there are particular advantages to using these routes as compared with alternative routes. This means that responsible agencies have taken actions to assure that these routes are suitable as shared routes and will be maintained in a manner consistent with the needs of bicyclists. Normally, bike routes are shared with motor vehicles. The use of sidewalks as Class III bikeways is strongly discouraged.

It is emphasized that the designation of bikeways as Class I, II and III should not be construed as a hierarchy of bikeways--that one is better than the other. Each class of bikeway has its appropriate application.

In selecting the proper facility, an overriding concern is to assure that the proposed facility will not encourage or require bicyclists or motorists to operate in a manner that is inconsistent with the rules of the road.

An important consideration in selecting the type of facility is continuity. Alternating segments of Class I and Class II (or Class III) bikeways along a route are generally incompatible, as street crossings by bicyclists are required when the route changes character. Also, wrong-way bicycle travel will occur on the street beyond the ends of bike paths because of the inconvenience of having to cross the street.

PROGRAM

Approximately 55%[1] of reported bicycle accidents occur at intersections and 66%[2] of fatal accidents in California occur at intersections. The integration of bicycle lanes within intersection design is therefore, extremely important to the overall safety of the proposed bikeway system.

1National Safety Council
[2]California Highway Patrol, October 1971

At the present time, some bicyclists are guilty of two intersection violations: (1) not coming to a complete stop at stop signs, and (2) disregarding the stop light. The need for bicyclists to obey all traffic signals cannot be over-emphasized.

A major problem for the bicyclist at an intersection is making a left turn in front of on-coming traffic. There are numerous ways to make left turns, many of which are dangerous. Two ways that are legal should be used.

Experienced cyclist should merge with traffic to the left turn lane location and proceed as a car would. It is recommended that inexperienced cyclists proceed through the intersection, wait, and proceed with the left turn when safe to do so (or wait until the light has changed).

In order to make an intersection safer for the bicyclist, standard marking patterns should be utilized. The use of these markings would decrease bicycle-automobile intersection conflicts and make bicycling safer.

Safety

Safety is of the utmost importance in considering bicycle facilities. Therefore, safety factors pertaining to roadways must be of a primary concern. The leading violations are: (1) riding on the wrong side of the road, (2) failure to yield while entering the roadway, (3) failure to obey traffic signs and signals and (4) riding at night without lights. The solution to these problems are primarily education. It makes sense to teach cyclists how to ride properly. The motorist should also be cognizant that cyclists have certain rights too! The extent to which these concepts are applied is dependent upon volumes and speeds of vehicular and bicycle traffic as noted hereafter.

Residential Streets

Speeds and volumes on residential streets are normally not high enough to require traffic separation. Signing of the route should be sufficient to designate the street as an established bicycle route thereby informing motorists that bicycles will be using the same facility. It is assumed that motorists will then extend the proper courtesy and use good driving habits to insure the safety of both themselves and the bicyclists.

Arterial Highways

A wide separation is recommended between bike paths and adjacent highways. Bike paths closer than 5 feet from the edge of a highway shall include a physical divider to prevent bicyclists from encroaching onto the highway. Suitable dividers could include chain link fences or dense shrubs. Low barriers (e.g., dikes, raised traffic bars) next to a highway are inappropriate because bicyclists could fall over them and into oncoming automobile traffic. In instances where there is danger of motorists encroaching into the bike path, a positive barrier (e.g., concrete barrier, steel guard railing) should be provided.

Bike paths immediately adjacent to streets and highways are not recommended. They should not be considered a substitute for the street, because many bicyclists will find it less convenient to ride on these types of facilities as compared with the streets, particularly for utility trips. Some problems with bike paths located immediately adjacent to roadways are as follows:

They require one direction of bicycle traffic to ride against automobile traffic, contrary to normal rules of the road.

When the bike path ends, bicyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, bicyclists approaching a bike path will often travel on the wrong side of the street in getting to the path. Wrong-way travel by bicyclists is a major cause of bicycle/auto accidents.

- At intersections, motorists entering or crossing the highway often will not notice bicyclists coming from their right, as they are not expecting contraflow vehicles. Even bicyclists coming from the left may go unnoticed.

- When contructed in narrow roadway rights-of-way, the paved shoulder is often sacrificed, thereby decreasing safety for motorists and bicyclists using the roadway.

- Many bicyclists will use the highway (legally) instead of the bike path because they may feel the highway is safer, more convenient or maintained better. Bicyclists using the highway are often subjected to harassment by motorists, who feel they should be on the path, instead.

- Bicyclists using the bike path generally are required to stop or yield at all cross streets and driveways, while bicyclists using the highway will usually have priority over cross traffic.

- Stopped cross street motor vehicle traffic will often block the bike path crossing.

- Because of the closeness of motor vehicle traffic to opposing bicycle traffic, barriers are often necessary to keep motor vehicles out of bike paths and bicyclists out of motor vehicle lanes. These barriers cause many problems. They can be a hazard to bicyclists and motorists, and they can complicate maintenance of the facility.

For the above reasons, bike lanes or bike routes (shared use) are generally the best way to accommodate bicycle travel along highway corridors, when it has been determined that bikeways are appropriate.

Bike Paths

Safety aspects regarding properly designed and maintained paths are few, and not primarily related to the facility but rather to its uses and users. Once established, the trails must remain solely for bicycles, although pedestrian uses may be included. Minibikes, motorcycles, etc., would create extremely unsafe conditions and should be prohibited. Also, equestrian uses should not be permitted within 10 feet of the bicycle facility since compatibility between horses and bicycles is questionable.

Bicycle Safety Education - Enforcement

Safety and enforcement of rules are major factors not only in consideration of the facilities themselves, but also of the users of the system. Knowledge of bicycle regulations by the general public appears to be very minimal although safety education for school children is a significant element of both school curricula and police department activities.

Education, however, is dependent upon local agencies and has not as yet been a coordinated operation. With the establishment of a countywide system both safety and bicycle regulation education will be necessary on a much greater scale then presently exists. Education of adults as well as children must be accomplished to insure safe and proper use of the system. A concentrated effort throughout the region combining the resources of local agencies, schools, civic organizations and the communications media should be developed. In concert with an educational program, more enforcement of bike and vehicles laws is necessary.

Accessibility of Recreation Routes

One of the key objectives in establishment of any recreation system is convenience of location in relation to the population, and this is also true of proposed bicycle routes. The nature of bicycle trails and ways are such that accessibility should not be a significant problem if existing or proposed recreation facilities and roadways are utilized as focal points in the system.

Linkage

Although bicycle routes will provide recreation potential in themselves, use of the routes as linkages between different recreation areas, neighboring communities, significant points of interest, or between communities and recreation areas should be considered. Analysis of proposed routes from this perspective allows multiple use of the route by serving transportation as well as recreation purposes.

Bike Path Attraction

Trail attraction will have perhaps more effect upon repeated use of the proposed route than any other single factor. It encompasses many of the criteria previously presented and is in general a statement regarding the physical characteristics of the trail itself. Included in this criterion is consideration of the comfort, rideability, safety, and uniqueness of the trail or path. Surface smoothness (material) and general condition are the primary aspects of comfort. Rideability covers topography (grades), ease in handling (width) and layout (bends, turning radii). Safety includes intersection systems, traffic separation, and condition of riding corridors (zone in which bicyclist operates). Variation in grade and surface structure and layout, including weaves and bends, separation of two-way traffic by natural means (trees, rock, etc.), breaks in path or trail continuity, etc., are elements to be considered under uniqueness.

Aesthetics

Perhaps the most difficult and by far the most subjective criterion is that of the aesthetic value of a route. It differs from trail attraction in that aesthetics relate to the area within which the route is placed, and should be of primary importance when priorities of bicycle ways and trails are established.

Because aesthetic values vary with each individual, a particular checklist is not presented. In general, however, trails and ways should be established in areas where visual amenities and scenic vistas predominate to provide a pleasing and satisfying environment. Although wooded regions, lazy country roads and beaches are generally thought of as amenity areas, urban regions encompassing unique forms of architecture, or cultural and historical significance should also be considered from the aesthetic viewpoint.

The last few criteria noted above are most applicable to recreation oriented routes. However, where possible and practical, these criteria should be considered when evaluating routes emphasizing transportation, so as to enhance the quality of the bicycle trail or way. Similar emphasis is now being placed on the planning and development of scenic highways, where analysis of the adjacent environment and visual amenities as well as safety, convenience, cost and direct route determination are included.

Bikeway Signing

The development of adequate signing for bikeways must consider both the motorist and the cyclist. The cyclist needs adequate signs to designate a route in order to permit those using the facility to know that they are traveling on a bikeway and to help them stay on the bikeway. This requires signing at all decision points along the route. The cyclist must be advised of approaching changes in direction and would benefit from knowing the compass direction in which he is traveling.

Signing for the motorist should make him aware that a bikeway exists along his route or that he is about to cross a bikeway.

Signs for these purposes are found in the Uniform Manual of Traffic Control Devices.

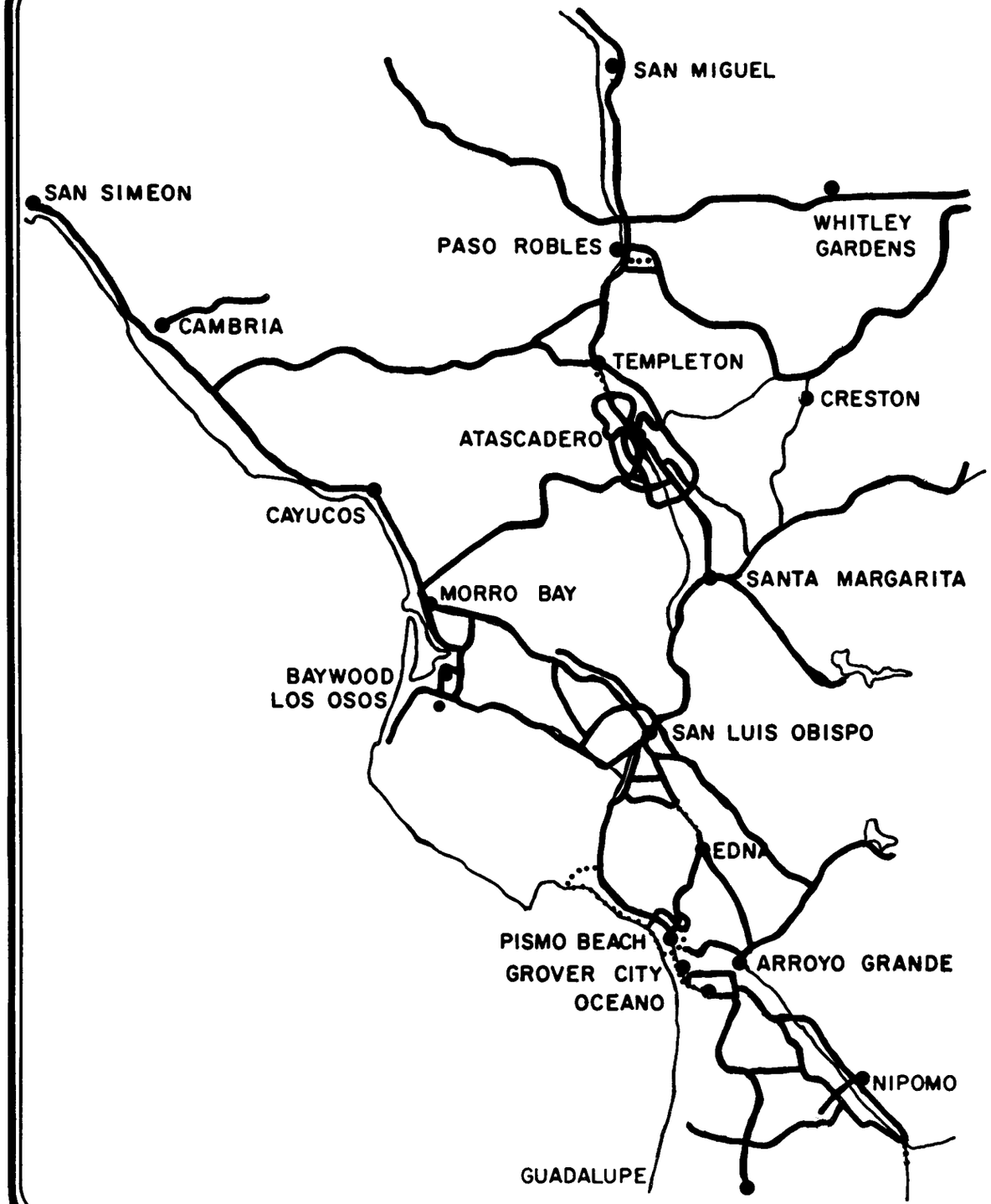
Bicycle Support System

Cyclists have the need for support facilities depending upon the type of riding that is being done. These support facilities include the transportation network (whether a specific bikeway or other roadway); vehicle service facilities to permit repair and storage of bicycles; travel amenities, such as restrooms, drinking fountains, restaurants, telephones, campgrounds, information services; and regulatory functions, such as vehicle registration, vehicle operating code requirements, driver education, and law enforcement. The combination of the above combined with the bicycle constitutes a total operating system for cycling and these factors should be considered. Sport, recreation, and other long distance riding generally has greater need for these types of services and support systems than does neighborhood or commute riding and plans should be made with the kind of riding anticipated in mind.

In planning bicycle facilities, it is important to keep in mind that adequate terminal areas are necessary if the cyclist is to be properly served. The problem of theft has become major; and safe, secure storage facilities should be provided. Methods should be provided to permit bicycles to be locked. Mixed-mode travel typically will require adequate storage facilities for one end of the trip. Where there are major generators of bicycle traffic, it is essential to provide storage facilities in order to properly manage and control bicycle parking. The cyclist will leave his bicycle at the safest, most convenient place unless he is required to store it at a specific location. Adequate storage facilities will prevent inappropriate and indiscriminate storage of bicycles. These facilities should be located at destination points on the Bikeway Plan. As the need occurs other facilities should be provided along specific routes.

Many people who now have bicycles use them less often than they wish for one good reason. Bicycles are not safe when left unattended. Very few employers, shopping areas, churches, apartments, etc., have facilities where bicycles may be stored safely. Although it appears that absolute security is impossible, many systems have been developed which offer adequate security. Bike racks which allow front and rear wheels of the bicycle, as well as the frame to be secured should be used. The racks should be anchored to the paved or concrete surface on which they are located.

Racks of this type should be provided at various locations where any land use which is used or whould be used by s significant number of cyclists such as, public buildings, schools, parks, shopping centers, theaters, churches, hospitals, apartments, restaurants, etc. The zoning ordinance should be amended to require bicycle parking as well as auto parking. This would not be a great expense and many existing establishments could easily convert areas of their property to bicycle parking.



LEGEND

CLASS I

CLASS II & III

BIKEWAYS ELEMENT

FIGURE 11

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT

DIRECTOR: NED A. ROGOWAY

IMPLEMENTATION

There are a limited number of consistent sources of financing for bicycle facilities. Money from the two State-sponsored funds, SB 36 and SB 325, may fluctuate from year to year. SB 36 funds are competed for by agencies throughout the State. SB 325 funds are available only after all multimodal planning and transit needs have been met.

The Area Planning Council approves projects using 325 money, to be used for bicycle routes. For bike trails constructed over State Park land it was assumed that State Park funds would be used.

California's proportion of Federal Highway Act of 1973 bicycle funds have already been allocated over the next several years. There, they were not considered to be an available source of revenue for improving or establishing bike routes.

Unfortunately, most programs are allocated on a discretionary basis which leads to uncertainity in forecasting future revenues. It is therefore reiterated that funds in sufficient quantity to construct a minimal portion of the County system should be allocated by the State through a central multimodal funding program.

The Bikeways System could be implemented on the County level by including them in the County Improvement Standards. As segments of streets are improved, they would include bikepaths. They could also be imposed as a condition of development for any large-scale project.

SUMMARY AND RECOMMENDATIONS

General

1. That the Bikeway Element consist of an integrated network with coordination and continuity of routes through various political jurisdiction and that each route segment that is implemented is not dependent upon the completion of the total large scale system.

2. A safety education and community relations program should be initiated and should be a significant element of the school curricula, civic organizations and the communication media.

3. That new transportation systems in the County should take into consideration and include mixed-mode travel needs of the cyclist.

4. That a Countywide Bikeway system should be thoroughly integrated with riding and hiking trails, scenic and historic points of interest, parks and recreation areas, scenic highways and all modes of transportation, thereby taking advantage of limited funding.

5. That law enforcement agencies enforce rules of the road as well as bicycle safety laws as defined by State and local law.

6. That all local agencies should adopt a policy establishing developer's responsibility of providing bikeways in construction of new subdivisions where appropriate.

7. That when a governmental agency constructs a new roadway or enlarges existing facilities that provisions for the bicyclist and pedestrian be considered.

8. That the State Department of Transportation and the Federal Government provide for pedestrian and bicycle travel and crossings at locations that have been severed by public highways.

9. Each agency designates a yearly sum for the construction and maintenance of bikeways as outlined in Section 99234 of the Mills-Alquist-Deddeh act (SB-325, The Transportation Development Act of 1971). This money may not be spent when allocated, but should remain in a fund to be used exclusively for this purpose.

Areas of Priority

10. First priority routes must be to establish commuter routes in urban areas that will jointly serve school children. A high priority should be given to projects which are designed to improve the safety of existing facilities.

11. The second priority is to establish short, family-type recreational bikeways near population centers and high activity generators.

12. The third priority is to establish long distance bicycle routes.

Design Criteria

13. That all agencies use the most recently adopted State of California Department of Transportation Bikeways Design Standards.

14. That bicycle parking facilities be provided at all public buildings, shopping centers and other places of employment and business as required.

15. That bicycle signing and stenciling conform with State standards.

TRANSIT ELEMENT

TRANSIT ELEMENT

A Transit Element is a major portion of any transportation plan in these times of high gas costs, air pollution, congested freeways, and long distance driving. Although a rapid transit line such as the BART system in San Francisco or other systems in highly urbanized areas may be inappropriate for rural San Luis Obispo County, alternative mass transit systems such as Fixed Route Bus Systems or Dial-A-Ride Systems play an important role in the County Transportation Plan.

Over the past two years a greater interest in transit for San Luis Obispo County has been shown than ever before. The low densities and dispersed nature of the area create a situation in which mobility needs are almost totally met by private automobile. For low mobility groups (that is, those without access to an automobile) this poses a severe problem and one of the goals of the Transit Element is to create a transportation system which will provide greater travel opportunities for these people.

An additional aim in providing transit service is to reduce the dependence on the private automobile for those persons who do have a choice. In developing such plans, however, it is necessary to be realistic, and realize that within the resources available to the County, only a limited diversion from private automobile can be achieved. There is a spaciousness not enjoyed by other coastal areas in California, and many people chose to live here for that reason. This spaciousness adversely effects transit.

The County Transportation Plan aims at initially providing transit service for those who need it most. Then with attractive and viable service, persuade automobile users to utilize the transit system whenever possible. Thus three-car families could become two-car families, and two-car families could become one-car families and adopt transit as their "second car." In addition, as the costs of operating automobiles rise, trends toward transit and away from automobiles will develop.

Existing Transportation Services

Intracity transit systems in operation at present are in the cities of San Luis Obispo and Morro Bay. The newly introduced South County Area Transit (SCAT) is providing intra and inter-city service to South County residents in Arroyo Grande, Pismo Beach, Grover City and Oceano. Paso Robles is connected with communities in the Central Valley by a line which travels Highway 46 to Bakersfield.

In addition to these bus operations, taxi companies are licensed to operate with the County. Also, active senior citizens groups in many communities own and/or operate vans to serve senior citizens or economically handicapped persons in their respective areas. Several other transportation services exist to serve the special demands of private group interests (churches, student housing, motels, etc.)

Interregionally, AMTRAK provides rail service for San Luis Obispo. Scheduled flight service to San Luis Obispo is provided by Swift Aire.

The airport in Santa Maria (Santa Barbara County) provides air service which is also utilized by San Luis Obispo County residents.

ALTERNATE TRANSIT CONCEPTS

There exists today a wide variety of alternative transportation systems and programs which are either operational or technically feasible for the near future. Several of these alternatives appear to be applicable to San Luis Obispo County while others are clearly not compatible with the needs or demands of potential public transit users in the County. Those systems applicable to this county are:

Fixed Route

Systems which follow a predefined route are classified as fixed route systems. They may adhere to a schedule or be unscheduled, and

they can operate on shared rights-of-way with other modes (such as buses on highways) or operate alone on exclusive rights-of-way.

Different sizes of vehicles can be used for continuous fixed-route service, depending upon the demand within the service area. They include bus wagons (simple conventional vans accommodating approximately 8 persons plus a driver), the minibuses, (medium capacity vehicles with seating capacity ranging from 17 to 25 persons and often accommodating an equal number of standees), and conventional buses (with a carrying capacity of 40 to 45 persons seated and, in many cases, room for 40 or more standing passengers).

Express service operates directly between outlying origin points and other high activity centers. Exclusive busway travel utilizes exclusive rights-of-way on existing streets and freeways. Another form of express service is charter service.

The other major category of fixed route transit service follows a variable schedule. One of the most common forms of variable scheduled services is a jitney, where a bus or van uses a fixed route but is not restricted to any schedule.

Other variable scheduled systems use a fixed or exclusive travelway. Some of these systems include PRT (Personal Rapid Transit), people mover, and rapid rail systems.

Demand Responsive

Over the last several years a form of transit which provides door-to-door service has been introduced and found to be feasible in many communities where fixed route systems cannot economically provide adequate service. Sometimes called "dial-a-ride", it consists of buses or vans which operate similar to taxies.

Generally the procedure followed is: 1) the person desiring a ride telephones a central dispatcher and tells them when and where they would like to be picked up and where they would like to go; 2) the dispatcher logs this information and radios the appropriate bus advising of the desired pick up; 3) within the predefined time limit (typically a half hour or less) the patron will be picked up; 4) when the bus arrives, the passenger boards and is taken to the desired destination. Between the time the passenger is picked up and delivered to the destination, the bus may stop to pick up and/or drop off other passengers.

Another type of dial-a-ride is termed a rover bus system. The rover bus would come to a specific city on a periodic basis such as once or twice per week depending upon the demand, and would serve the people within that community on those days.

An additional demand-responsive implementation strategy is a taxi subsidy program. As the name implies, this program subsidizes persons using a taxi by paying some portion of their taxi fare. A comparison of the operating characteristics of different transit system concepts is shown in Table 6.

The pure jitney service does not appear feasible due to lack of demand along any single corridor in the County. However, the concept of boarding or discharging from a bus and point along a route could be integrated with a fixed route/fixed schedule system as it is in the City of San Luis Obispo.

TABLE 2

EXISTING AND PROGRAMMED TRANSPORTATION SERVICES

INTRA-COMMUNITY					INTER-COMMUNITY AND INTER-REGIONAL		
City or Community	Bus	Taxi	Senior Citizen Bus	Other	Bus	Rail	Air
Arroyo Grande	Fixed Route SCAT	Five Cities Taxi Yellow Cab	So. County Senior Citizens own a van to transport members of their club and other individuals in the area.		Greyhound 6 S.B.-6 N.B Fixed Route (SCAT)		
Atascadero	Proposed DAR (Dial-a-Ride)	Yellow Cab	Atascadero Senior Citizens United own a van. Operates Daily 10am-4pm Primarily serves Senior Citizens.		Greyhound 6 S.B-7 N.B.		
Avila Beach				Avila Functional School Van for Handicapped			
Cambria			Senior Van		Proposed Fixed Route		
Cayucos			Cayucos Senior Citizens Club owns a van primarily serves senior citizens.		Proposed Fixed Route		
Paso Robles		Paso Robles Taxi	E.O.C. owns a station wagon. No regular service. *		Greyhound 10 S.B.-10 N.B Orangebelt line to Bakersfield once per day 2pm		
Baywood/ Los Osos			Senior Van		Proposed Fixed Route		
Grover City	Fixed Route SCAT	Five Cities Taxi Yellow Cab	Senior Citizens Club is buying a station wagon to serve senior citizens in the city.		Fixed Route (SCAT)		
Lake Nacimiento							
Morro Bay	Dial-a-Ride System. 3 buses.		Morro Bay Senior Citizens own a van. Primarily service for Senior Citizens; some regular service.				
Nipomo			Nipomo Senior Citizens Club owns a van. Is used when more than 4 individuals want to go to a specific designation limited service.		Greyhound 2 S.B.-3 N.B Proposed Fixed Route		
Oceano	Fixed Route SCAT		E.O.C. owns a van which is available for senior citizens but is in poor condition.		Greyhound 6 S.B.- 7 N.B Fixed Route (SCAT)		
Pismo Beach	Fixed Route SCAT	Five Cities Taxi Yellow Cab	One van; trips to 5 cities daily, SLO 3-5 trips weekly.				
San Luis Obispo	Fixed Route Schedule 4 Bus, 4 Route System	Yellow Cab	E.O.C. owns a van which is shared by senior citizens, Grass Roots.	Tropicanna buses - Transport students between Tropicanna and car pool; United Church care center for patients	Greyhound 10 S.B.-10 N.B. 11	Amtrack 1 SB 1:45pm Daily 1 NB 2:35pm Daily	Swift Aire 6 L.A. - 5 S.F. 5 S. Jose - 3 Sac. 3 Fresno
San Miguel			Served by Atascadero		Greyhound 1 S.B. 1 N.B		
Santa Margarita			Served by Atascadero Van (See Atascadero)		Greyhound 3 S.B. 2 N.B Proposed Fixed Route		
Templeton			Served by Atascadero Van (See Atascadero)		Greyhound 3 S.B. 3 N.B. Proposed Fixed Route		

COUNTY-WIDE - "ELDERLY/HANDICAPPED SYSTEM" - PROPOSED COUNTY-WIDE, INTEGRATING EXISTING SENIOR VAN NETWORK FOR FEEDER SERVICE

TABLE 3

COUNTY DEMOGRAPHIC DATA 1976

COMMUNITY	POPULATION (1)	PERCENT 18 AND YOUNGER	PERCENT 65 AND OLDER
Arroyo Grande	9,550	32	7
Atascadero	12,823	27	10
Avila Beach	343	9	10
Baywood/Los Osos	8,075	22	13
Cambria	2,667	18	18
Cayucos	2,081	17	21
Grover City (1)	7,500 (2)	30	16
Lake Nacimiento	271	16	13
Morro Bay	8,392	19	23
Nipomo	4,300	35	8
Oceano	3,434	31	13
Paso Robles	7,932	32	8
Pismo Beach (1)	4,870 (2)	20	21
San Luis Obispo (1)	34,300 (2)	21	9
San Miguel	724	33	9
Santa Margarita	707	26	12
Templeton	776	29	13
County	132,526	25 (3)	13 (2)

(2) Incorporated city estimates
(3) Average of individual community values

1)Source: 1976 Special Census, San Luis Obispo County Planning Department. (except as noted)

TABLE 4

COUNTY LAND USE DATA 1976

COMMUNITY	DENSITY PERSON/ACRE	SERVICES	ATTRACTIONS
Arroyo Grande	3.13	5	10
Atascadero	1.69	7	8
Avila Beach	1.27	2	1
Baywood/Los Osos	3.89	2	3
Cambria	1.19	2	6
Cayucos	3.28	3	3
Grover City	5.68	5	4
Morro Bay	3.2	5	9
Nipomo	1.27	3	3
Oceano	4.07	3	4
Paso Robles	2.5	7	12
Pismo Beach	2.40	5	7
San Luis Obispo	6.54	15	36
San Miguel	.96	1	3
Santa Margarita	2.15	2	2
Templeton	1.26	2	2
County	2.78 *	--	--

* County Average

Source: San Luis Obispo County Population Density based on the 1976 population information. Services and Attractions - JHK & Associates and San Luis Obispo County Planning Department

TABLE 5

COUNTY SOCIOECONOMIC DATA 1976

COMMUNITY	MEDIAN INCOME	% OF PERSONS ON SOCIAL SECURITY	NUMBER OF HOUSEHOLDS POVERTY LEVEL (2)
Arroyo Grande	$13,681	3.8	NA
Atascadero	12,224	3.5	1188
Avila Beach	6,825	(1)	57
Baywood/Los Osos	11,277	.9	1128
Cambria	10,357	2.5	336
Cayucos	8,795	4.1	187
Grover City	9,301	7.4	NA
Lake Nacimiento	10,940	6.3	26
Morro Bay	11,029	4.6	1350
Nipomo	9,846	4.0	372
Oceano	7,166	6.4	347
Paso Robles	10,221	7.4	939
Pismo Beach	12,291	3.9	NA
San Luis Obispo	13,856	2.5	NA
San Miguel	7,352	6.0	91
Santa Margarita	8,864	5.8	84
Templeton	9,643	6.8	60
County	11,262	4.6	475

(1) Included in Pismo Beach figure.
(2) Poverty level defined as under 80% of median income by the Housing and Urban Development Department.

NA 1976 Data unavailable for incorporated cities.

Source: Median Income, Poverty Level - 1976 Special Census, San Luis Obispo County Planning
Social Security - Social Security Administration.

TABLE 6

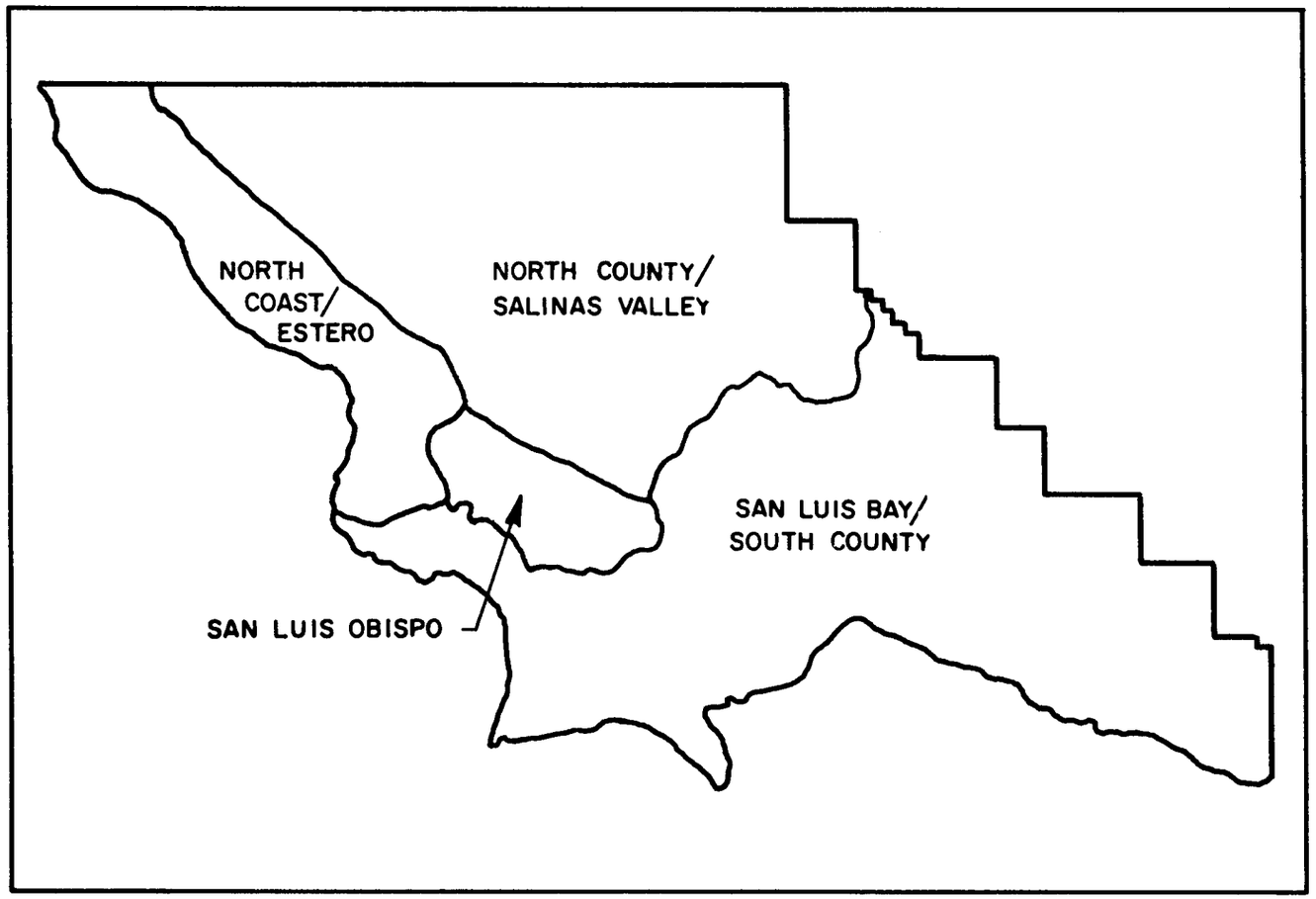
TRANSIT CONCEPT COMPARISON

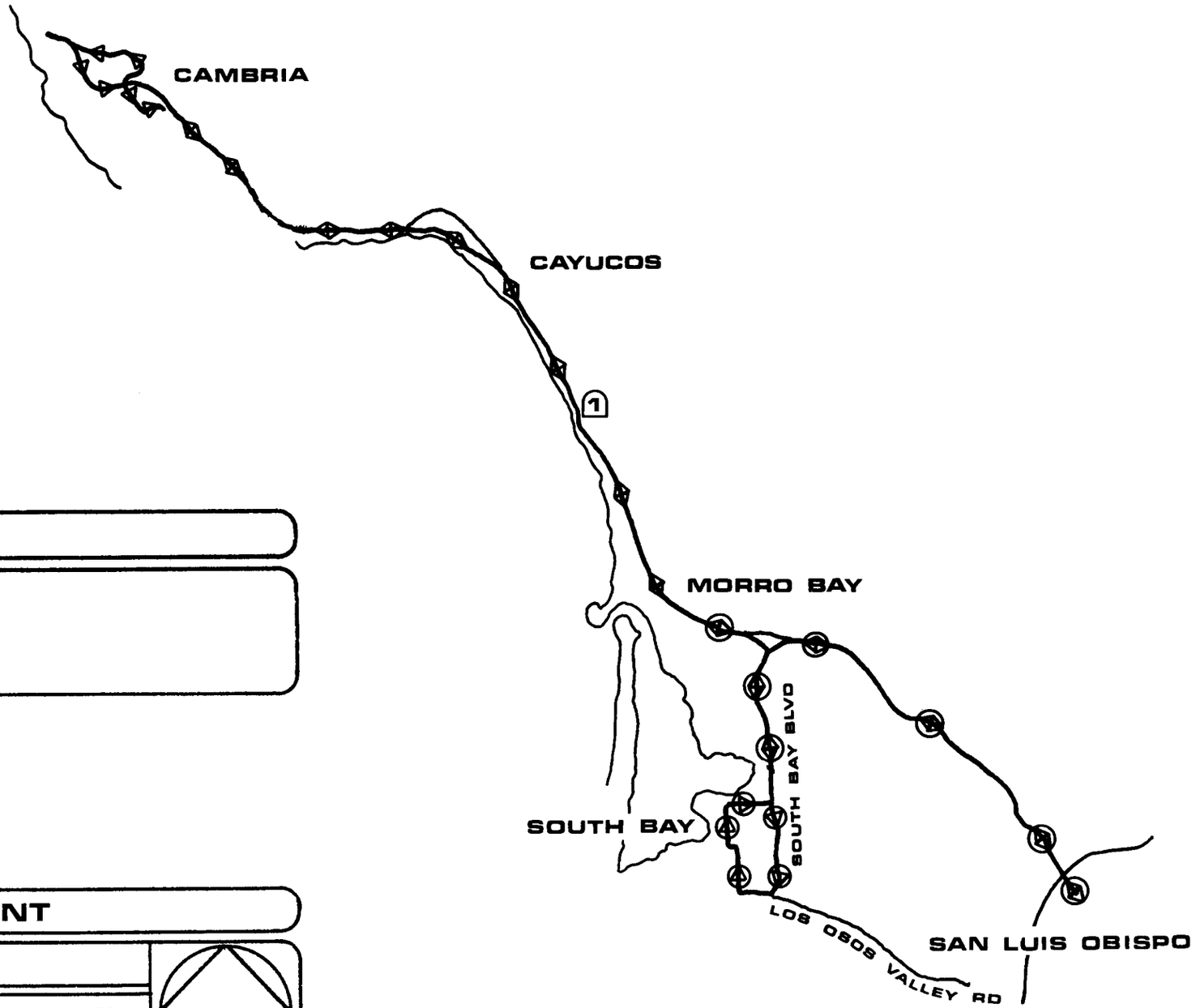
Systems	Practical Passenger Capacity per Hour per Lane or Tract	Passenger Capacity per Bus or Car	Capital Cost of Vehicle	Capital Cost per Route Mile (Million $)	Operating Cost per Vehicle Mile ($)	Propulsion Energy Consumption BTU's per Mile Passenger	Threshold Limit (Person per Acre)
FIXED ROUTE							
Bus Wagon		8	6,000		0.31	2.0	5.5-8.5
Minibus		17-25	18,000		0.66	1.5	8.0-10.5
Conventional Bus	0-5,000	41-45	40,000		1.00-1.85	2.5-3.8	9.5-12.5
Expressway Bus	2,000-10,000	50-55	45,000		0.65-1.96	1.5-2.5	
Exclusive Busway	4,000-15,000	50-55	45,000	2-7	0.44-2.35	1.5-3.0	
Jitney		5	4,000		0.29	1.5-6.0	14.0+
Personal Rapid Transit	2,000-25,000	6-20	90,000	5-10		0.5-2.0	
Rail or Rapid Transit	12,000-40,000	70	350,000	8-13	3.00-4.20	0.5-2.5	
DEMAND RESPONSIVE							
Dial-A-Ride					0.80-1.50		3.1-4.7
Delay Dial-A-Ride					0.80-1.50		2.5-3.2
Rover Dial-A-Ride					0.80-1.50		< 2.5
Taxi Subsidy		1-5				7.0-17.0	

Source: Propulsion Energy Consumption - CALTRANS

FIGURE 12

TRANSIT PLANNING SUBREGIONS





LEGEND

- TWO-WAY ROUTES
- ONE-WAY ROUTES
- COMMUTER ROUTES

TRANSIT ELEMENT

FIGURE 13

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

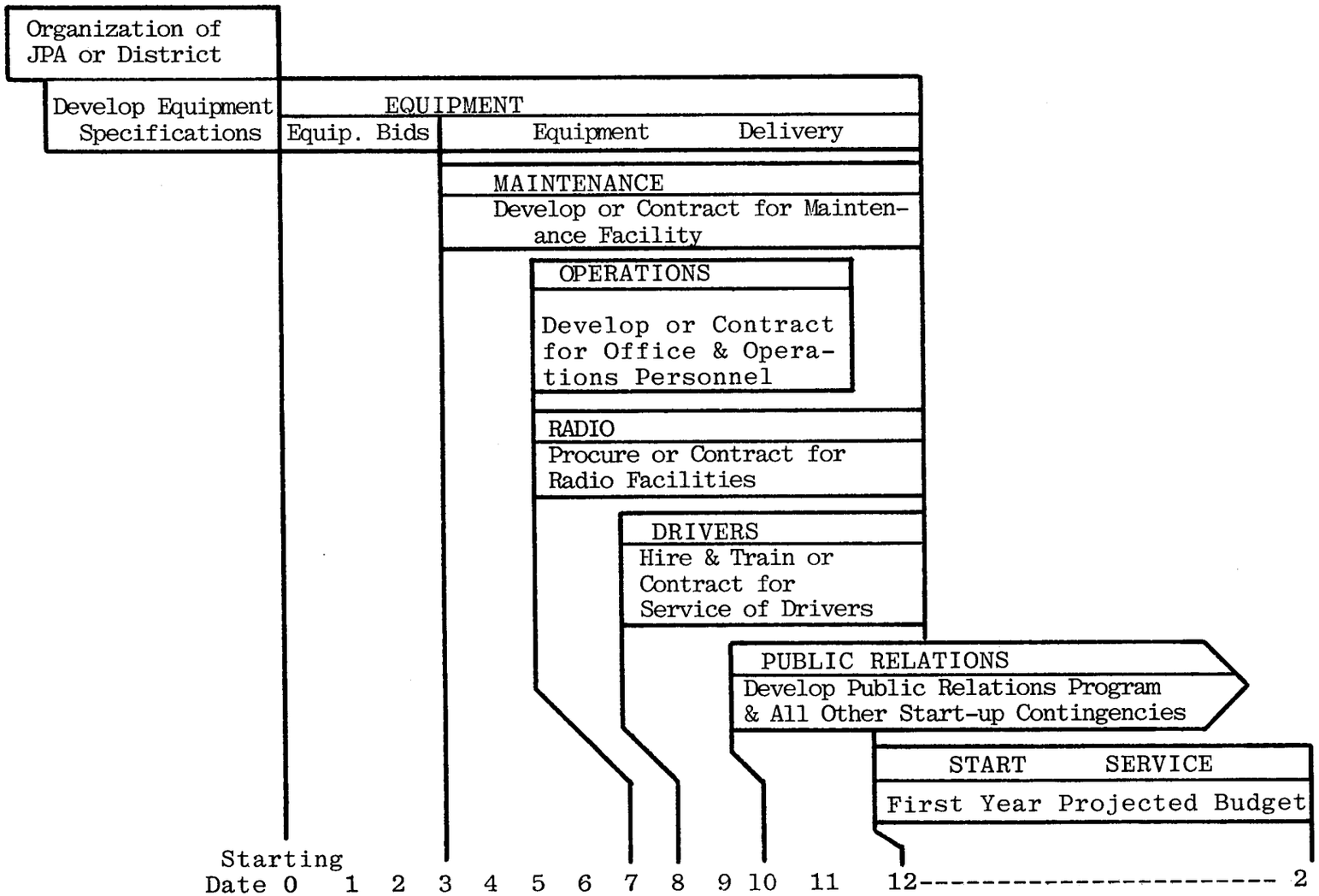

Organization of JPA or District
Develop Equipment Specifications
EQUIPMENT
Equip. Bids
Equipment
Delivery
MAINTENANCE
Develop or Contract for Maintenance Facility
OPERATIONS
Develop or Contract for Office & Operations Personnel
RADIO
Procure or Contract for Radio Facilities
DRIVERS
Hire & Train or Contract for Service of Drivers
PUBLIC RELATIONS
Develop Public Relations Program & All Other Start-up Contingencies
START SERVICE
First Year Projected Budget
Starting Date 0 1 2 3 4 5 6 7 8 9 10 11 12---------- 2
--------TIME IN MONTHS---------
ACTION ---- TIME ---- COST ---- REGIONAL SYSTEM ONLY

Figure 14

SHORT RANGE PLAN (0 - 6 Years)

The Transit Element is divided into three segments; intracommunity transit services, intercommunity transit services, and transit for the handicapped/elderly. Each segment contains a short summary of the services to be provided, the operating characteristics of each system, and the financial implications associated with the Element. Adjustments will be made as required as the system is incrementally implemented.

COUNTYWIDE TRANSIT SYSTEMS

The intercommunity transit plan was developed from the analysis of County transit travel needs in combination with a review of existing intercommunity person trip demands and input from public meetings and hearings. The intercommunity transit routes are depicted on Figure I where it can be noted that every community except San Miguel and Lake Nacimiento is provided with some form of intercommunity transit service.

The schedules and associated levels of service are a function of the magnitude of total daily person trip demand combined with the recreational potentials for each area. For example, the Morro Bay-San Luis Obispo-Five Cities corridor has both a high weekday travel corridor demand and high recreational potentials. The San Luis Obispo-Arroyo Grande-Santa Maria corridor has moderate demands, more oriented toward work, shopping, and general business uses than recreation with the exception of the high weekend recreational demand for Avila Beach.

In relation to recreational demand, it was found that while the recreational traffic travel demand to the County is high, the numbers of persons who would shift from private cars and recreational vehicles to transit would be insignificant unless severe limits and restrictions were placed on access to the private automobile. However, following the establishment of the basic transit system, the managing transit agency should periodically survey this potential market and where feasible and economical, propose pilot programs to test these needs. Some examples are as follows:

Daily service connecting San Simeon (Hearst Castle) with tourist accommodation areas located in Cambria and Morro Bay.

Weekend service tours. These could alter to tourists or more especially to low mobility groups such as the elderly. (Stockton, for example, has a special program of Saturday trips in which there is a special bus trip provided--in this case to a different locality each time.)

Presently there is a service to San Simeon, operated by Great Western Tours, a private company headquartered in San Francisco.

Once again, the greatest potential market will be the low mobility groups. Special services such as the service to San Simeon may be feasible through joint subscription agreements with hotel and motel operators.

After the scheduled services are established, studies should be made to determine if subscription commuter buses would be a desired service. This type of service would cater to the work and school commute demand. Under this plan fares could be sold at a reduced rate on a monthly or school-term basis.

As the first phase of implementing the intercommunity transit systems, the following is suggested for the first year.

South County Area

The Greyhound Bus Company makes approximately ten trips per day to and from Arroyo Grande, Pismo Beach and San Luis Obispo. SCAT system provides scheduled service to the Arroyo Grande and Pismo Beach Greyhound Terminals. The combined Greyhound and SCAT systems shall constitute the intercommunity system for the South County.

North Coastal Area

The San Luis Obispo Transit System will expand its service to the South Bay area and the City of Morro Bay. Service will be provided daily. A Joint Powers Agency will be formed to administer the system.

The County of San Luis Obispo will contract with the City of Morro Bay to provide transit service between the City of Morro Bay and the communities of Cayucos and Cambria.

North County Area

The Greyhound Bus Company makes twenty trips between the City of San Luis Obispo and the City of Paso Robles per day. This high level of service, along with their subsidized taxi program, adequately serves the intercommunity needs of the City of Paso Robles.

Greyhound provides very limited intercommunity transit service to the town of Atascadero. When intracommunity transit service is implemented in Atascadero, consideration will be given to expanding that service to provide service to the City of San Luis Obispo.

ELDERLY/HANDICAPPED TRANSPORTATION SYSTEM

Due to the large number of handicapped and elderly persons in the County (estimated to be almost 20,000) who have special requirements personal assistance and special transportation service be developed for the seriously handicapped. This system should start with three vehicles, some equipped with a hydraulic lift, facilities to accommodate wheelchairs, and should be manned with a driver and an assistant who would help passengers board and disembark. It is recommended that the vehicles be centrally dispatched from the City of San Luis Obispo and that the general service areas be as follows:

Bus 1 - North County/Salinas Valley

Bus 2 - San Luis Bay/South County

Bus 3 - San Luis Obispo and North Coast/Estero excluding Cambria.

Two logical and achievable elderly/handicapped system management alternatives include:

A. The transit agency provides driver and vehicle and a volunteer organization provides the assistant. Here, the major costs are borne by the transit agency, but there are significant cost savings by not having to provide the assistants and the management fees of profit oriented private enterprise.

B. A second alternative would be to operate the bus service by contracting with private enterprise. The advantage to this type system is that a more responsive level of service could be provided because of direct communication to the transit management. However, the costs are higher under this alternative.

Estimates of patronage for such specialized services are difficult to determine and therefore only order of magnitude estimates of costs can be made.

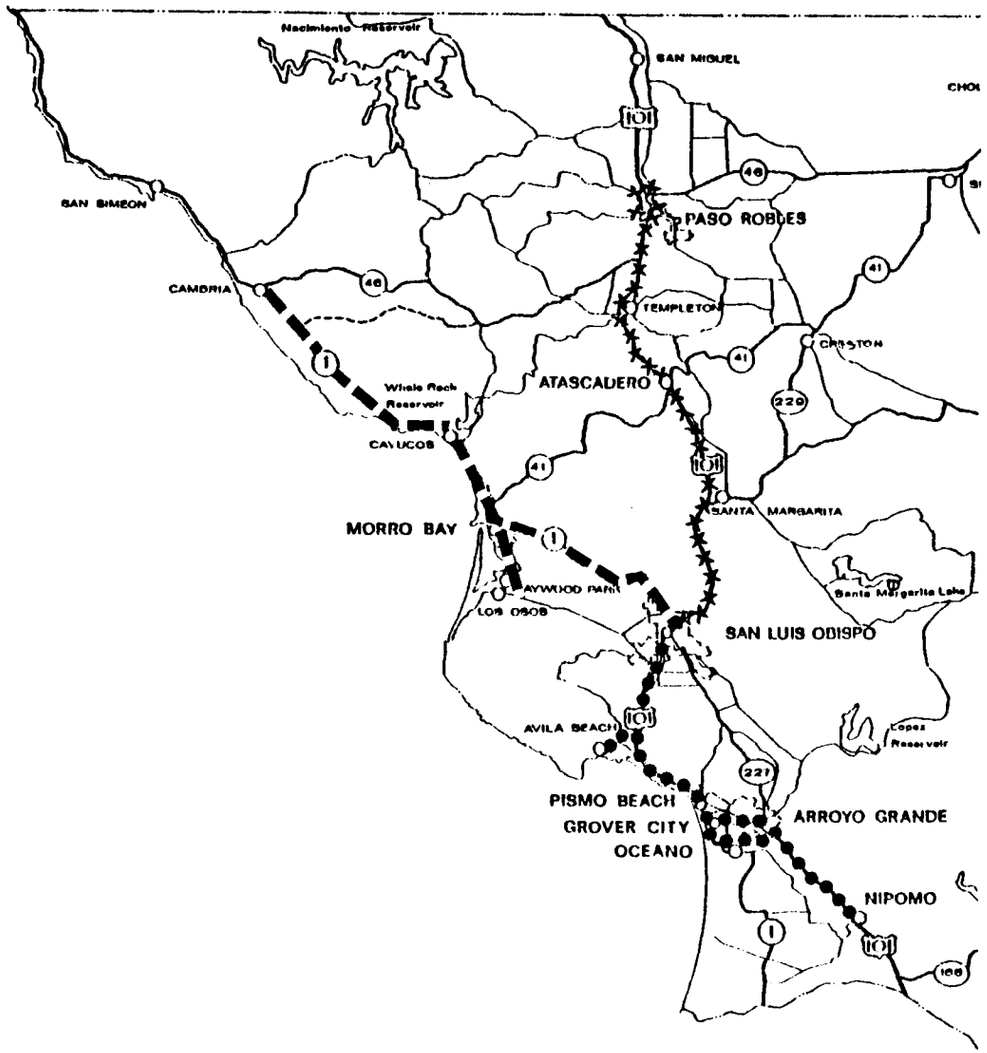
Based upon discussions with several agencies which are looking to provide such services for the handicapped in combination with the above-stated cost estimates, alternative A is recommended as part of the transit plan.

INTRACOMMUNITY TRANSIT

The following sections discuss the recommendations for each transit route as defined in Figure 15.

SAN LUIS BAY/SOUTH COUNTY

The cities of Arroyo Grande, Pismo Beach, Grover City and the Board of Supervisors (representing the Oceano area) have entered into a Joint Powers Agreement forming the South County Areas Transit



LEGEND

●●●● ROUTE I

×××× ROUTE II

▬▬▬ ROUTE III

TRANSIT ELEMENT

FIGURE 15

PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

(SCAT). This agreement gives the member agencies the authority to own, operate, and administer a public transportation system within the territory. The operation is a fixed route system serving all four areas and is mutually funded as such. SCAT was put in operation on the 5th of June, 1978. The vehicles operate on a fixed route basis, with two routes and a back-up vehicle. It operates five days per week, with a fare of 25¢ initially. Future study of the fixed route system may show that a Dial-a-Ride system is more responsive and the switch from fixed route to Dial-a-Ride might also prove more economical.

At the time a transit district is formed, this system should be maintained and managed by the district and the joint powers agency dissolved.

The costs associated with the above defined systems are approximately as follows:

Annual Patronage	$ 60,000
Capital Costs	55,000
Annual Revenue	12,000
Driver's Salaries	32,760
Total Annual Subsidy	82,340

As population and transit demands grow, review of the need for intracommunity transit service in Avila Beach or Nipomo should be made. Avila Beach presently has insufficient population to support transit at a resonable subsidy and the need to travel within Avila Beach is relatively small compared to the desire to travel outside the area to other communities.

Nipomo's needs present a borderline case for a periodic dial-a-ride (rover dial) system. However, in light of present travel demands it is recommended that only intercommunity service be considered for this community as part of the immediate action program. Nipomo should be monitored closely in future updates of the transit plan to assess the needs for internal transit service.

NORTH COUNTY/SALINAS RIVER

In the North County/Salinas River it was determined that the smaller communities of San Miguel, Templeton, Santa Margarita, and Lake Nacimiento could not support intracommunity service due to their size and small relative travel demand for intracommunity transportation service.

ATASCADERO

Due to its configuration and low population density a Dial-a-Ride Intracommunity service is the best service for Atascadero. Negotiations have been completed through the Board of Supervisors to institute the proposed Dial-a-Ride system. Service is expected by the Fall of 1979.

The costs associated with the Atascadero system are as follows:

Annual Patronage	$ 40,000
Capital Costs	20,000
Annual Revenue	9,000
Vehicle Operating Costs	24,000
Administration & Insurance	14,000
Driver's Salary	27,000
Total Annual Subsidy	85,000

This system could operate in conjunction with the Atascadero Senior Citizen Vans. When the senior citizen's vans are retired, it is recommended that the intracommunity system increase its capabilities to absorb the senior citizens.

NORTH COAST/ESTERO AREA

Cambria, Cayucos, and Baywood/Los Osos are each communities which should be closely monitored to ascertain when some form of periodic demand-responsive transit service is needed. One possible alternative to providing service to these and other small communities in the

County is to encourage a policy of subsidized taxis in those communities. This suggestion is not made as a programmed recommendation, however, because there are no existing taxi services in any of the three communities. However, should a taxi operator be attracted into one of these communities, it is suggested that a subsidy be provided. In addition, if Baywood/Los Osos continues to grow at a rate observed over the past several years, serious consideration should be given to making it part of the Morro Bay system as a third zone in the Morro Bay Dial-a-Ride system (i.e., using the Morro Bay dispatcher and central facilities). Application for UMTA grant has been made for vehicle and operating costs for third route from Morro Bay to Cuesta College, as incremental implementation of proposed County system.

SAN LUIS OBISPO AREA

This area refers primarily to San Luis Obispo City routes. Discussion is only included here where the system extends to County areas.

A fourth route of the S.L.O. City Bus System has been added providing bus service from S.L.O. to the Men's Colony and Cuesta College.

Furthermore, the following routing modifications to the S.L.O. system have been proposed:

> At Cal Poly, consideration should be given to allowing buses on campus to make flag stops rather than be restricted to stop at only four locations on campus. This could help to induce more student use which in turn would help to reduce the impacts associated with traffic and parking on campus.
>
> Assuming expansion trends at Cal Poly continue, long term consideration should then be given to the development of an integrated transportation and traffic circulation plan. Historically, new construction is located on land previously used for parking. As parking is decreased and/or relegated to peripheral fringes of campus, the provision of some form of intracampus transit system will become necessary. To provide maximum accessibility, such a transit system should have flexibility to travel through the campus using service roads, including those streets with card-actuated gates, restricted for University vehicles.

FIVE YEAR IMPROVEMENT PROGRAM

The five-year program assumes that in the future persons will use the transit system at a rate similar to that projected for the first year of operation. It is also anticipated that the urban structure will not change to the degree where a shift from demand-responsive to fixed-route service will be necessary. However, the overall plan has sufficient flexibility for the transit management agency to modify the type of transit service after operating experience has been gained and passenger response can be assessed.

As the first phase in the implementation of the recommended Elderly/Handicapped System, the following handicapped system is recommended for the first year:

A one-bus handicapped system be developed to serve zones of the County on a rotating basis. The service will be door to door on an advanced reservation basis.

Two alternates for providing the service are:

1. Contract with Morro Bay to utilize their handicapped vehicle to provide for regional handicapped service.

2. Seek proposals to provide for regional handicapped service from private organizations such as Central Rehabilitation Clinic, San Luis Ambulance, San Luis Transportation, and others.

Recommendation

That written proposals be solicited from the City of Morro Bay, Central Rehabilitation, San Luis Ambulance, San Luis Transportation Company and others to provide regional handicapped service.

The first costs of the first phase of the handicapped system will be shared by all the local agencies using the sytem.

INTERREGIONAL TRANSIT SERVICE

With regard to interregional transit service, the role of this study was to indicate point source deficiencies such as inadequate terminal capacities or transit system interfaces that should be upgraded. The analysis of system-wide priorities for Statewide and interstate travel demands should be the responsibility of Caltrans and the results and recommendations should be detailed in the California Transportation Plan.

The intercommunity and intracommunity transportation system recommendations outlined above do create a need for improved transit system interface in the region. To achieve system-wide continuity, interregional transportation terminals need to interface with one or another of the intercommunity or intracommunity transit systems. This interface between transit systems is outlined in Table 7. In developing this interface, effort was made to minimize the number of required transfers between systems and modes, thus increasing convenience and reducing travel times.

TABLE 7

INTERREGIONAL TRANSIT INTERFACE

INTERREGIONAL TRANSPORTATION TERMINALS	PRESENT INTERFACE	RECOMMENDED FUTURE INTERFACE
Arroyo Grande Greyhound Bus	Taxi, Senior Citizens' Vans, and SCAT	Intra-and Intercommunity Transit, Taxi, and Senior Citizens' Van
Atascadero Greyhound Bus	Taxi and Senior Citizens' Van	Intra- and Intercommunity Transit, Taxi and Senior Citizens' Van
Paso Robles Greyhound Bus	Taxi	Intercommunity Transit and Taxi
Paso Robles Airport	Taxi	Taxi - Limousine
Nipomo Greyhound Bus	Senior Citizens' Van	Intercommunity Transit and Senior Citizens' Van
Pismo Beach Greyhound Bus	Taxi and SCAT	Intra- and Intercommunity Transit and Taxi
San Luis Obispo Greyhound Bus	Taxi and Intracommunity Transit	Intra- and Intercommunity Transit and Taxi
San Luis Obispo Airport	Taxi	Taxi and Intracommunity Transit or Limousine
San Luis Obispo Train	Taxi and Intracommunity Transit	Taxi and Intercommunity Transit
San Miguel Greyhound Bus	- - -	Intercommunity Transit
Santa Margarita	- - -	Intercommunity Transit
Templeton	- - -	Intercommunity Transit

BICYCLES AND TRANSIT

To assist in intermodal interface between bus transit and bicycle travel it is recommended that a pilot project be initiated to test the feasibility of bicycle storage on the transit vehicles. The storage could take the form of racks mounted on the side or rear of the bus or a bike trailer which could be towed behind the bus. This pilot test should be instituted in areas where there is a high proportion of bicyle users (San Luis Obispo for example) or in corridors connecting recreational areas and other population centers (Five Cities-San Luis Obispo-Morro Bay). Full advantage should be made of pilot projects previously undertaken by other agencies.

FINANCING

The transit systems for San Luis Obispo County like other public transportation systems, cannot be expected to be self supporting. If the system is to provide an adequate level of service, the deficit must be subsidized. The system's deficit is the difference between the sum of the operating and the capital expenditures minus the transit revenues.

Recognizing the problems which systems throughout the country are experiencing with maintaining an adequate level of transit service, Federal, State, and local governments as well as private institutions are providing some form of financial assistance. Several possible programs are listed as follows:

Federal
- Urban Mass Transportation Act of 1964 (amended 1970)
- Health, Education and Welfare Outreach Programs
- Older Americans Act
- National Mass Transportation Assistance Act of 1974

State
- Senate Bill 325

County
- General Funds

City
- General Funds

Transit District
- Transit Tax

Private
- Private Foundations

SB 325 funds were primarily created to fund transit systems provided the agency either had a transit system or found the need for a new transit system. If the agency found there was not a need for a transit system, these funds could be then used on streets and highways or other unmet transportation needs.

The estimated County allocation of SB 325 funds for Fiscal Year 78-79 is approximately $900,000 and this figure is expected to increase slightly from year to year. Federal UMTA monies look on the surface to be large and easily accessible. However, there are a great number of other transit programs competing for this money, and the lag time between application for and receipt of funds is long. Therefore, dependence on these funds as a source of immediate capital should not be counted on too heavily.

The transit system consists of three separate and distinct systems. They are intercommunity, intracommunity and elderly/handicapped. Any of the systems can be implemented individually or jointly. A major issue to be resolved prior to implementation of any one of the services is an equitable formula for distribution of costs among the affected agencies. This is especially true in the case of a joint powers agreement.

LONG-RANGE PLAN

A detailed plan similar to the immediate action program was not developed for the long-range transit program. Costs for 1995 have

been estimated for financial programming purposes only. These were based on trends of population growth (assuming transit service will develop at a proportionate rate) and increased acceptability of transit in low density, dispersed areas like San Luis Obispo County. It is estimated that over the next 20 years the transit potential will increase due to continuing economic pressures, and more emphasis on energy conservation.

In place of a definitive program a series of future study elements are recommended. These work elements are predicated on potential changes in attitudes toward transit as well as adjustments in economic and social conditions. These future concerns can be grouped as follows:

Impact on demand--what effect will transit have on the ridership as land use, economic, or social conditions change.

Possible recreational concerns--possibility of heavy reliance on transit for meeting recreational needs.

Impacts On Demand

The choice of whether to use public transit or not is a social function of many factors including cost, convenience, and social acceptability. Since these factors undergo continual change it is impractical to project patronage for a transit system over extended period of time. It is appropriate, however, to continually monitor the variable indicators that could impact patronage and in turn the level of service. These particularly include energy shortages and gasoline price escalations which could have significant effects on transit usage.

Social Acceptability

Another factor, while hard to measure in absolute terms, relates to the social acceptability of the transit system. For example, during the 1950's and through the 1960's transit was looked upon as a second-class mode of travel with the large luxury car becoming the aspiration of the majority. However, during the later portion of the 1960's as environmental concerns (air pollution specifically) were brought into focus, private transportation trends shifted to the smaller vehicles. Hand in hand with this trend came public support policies aimed at revitalizing transit as an integral part of the transportation system. It is hoped and indeed anticipated that this trend will continue.

Competition

Concern might be expressed about establishing a County Transportation System in competition with existing private enterprise. Of particular note would be the duplication of services in the County between intercommunity buses with Greyhound. Also certain proposed dial-a-ride systems might be duplicating local taxi company service. Greyhound buses attract so little intraregional passengers that the competitive aspect seem insignificant. Within communities participating in a transit district and proposing dial-a-ride, taxi cab owners must be offered fair market value for their business if it has been determined that they might incur a financial loss due to dial-a-ride operating within their area.

Recreational Studies

In a county such as San Luis Obispo, recreational travel comprises a significant part of the economic base. This is especially true during the summer season when travel demand into and out of the County is compounded by the need to travel within the County. Studies should be made to determine if transit could be effectively utilized by the tourist.

San Luis Obispo - Avila Beach Rail

In earlier times, a narrow gauge railroad connected the communities of Avila Beach and San Luis Obispo. Originally powered by a team of horses, steam powered engines later took over. Over the past

several years, interest has risen to rebuild this railroad as recreational attraction and service. Several investigations have been directed toward this possibility. While they are for the most part incomplete and need closer scrutiny, there may at some future date be a potential. At present the costs would be too high in relation to even the highest estimates of demand. It is, however, recommended that when land is acquired by public agencies along a possible right-of-way, or the parking conditions at Avila Beach become severely restricted, that surveys be made to assess the demand for recreational travel to Avila Beach. Ridership on the San Luis Obispo to Avila intercommunity bus should be monitored closely, and if demand warrants, a feasibility study be made to assess the costs of construction of a narrow gauge railroad connecting the Amtrak Station with the Town of Avila. This proposal might best be implemented by the private sector.

Recreational Centers

Should travel to recreational sites become severely restricted due to high costs of fuel, restricted access or parking, or because of negative environmental impacts, recreational centers might be developed. Under this scheme, there would be one or several recreation centers from which recreational travel would emanate. All persons using the County's recreational sites would come to these sites with their recreational equipment and buses, vans, car-carrying trucks or trains would take them to their desired destination, thus reducing the individual vehicle trips into each recreational area. This type of program would have to be strictly regulated, and would only be considered if current attitudes regarding recreational travel change.

Recreation Train

Should the recreational attraction of the County reach such a high point that demand is sufficient to command the attention of a railroad company or AMTRAK, then consideration might be given to a recreation train which could stop along any of the towns where the Southern Pacific Line now passes (for example, Oceano). Such service would most likely initiate at major cities such as Los Angeles or San Francisco.

These studies should be timed at the discretion of the County since the timing of attitudinal changes cannot be predicted at present. Demonstration programs for projects similar to those outlined above should be considered for implementation when financing becomes available.

IMPLEMENTATION

Over the past several years emphasis has been toward provision of subsidies for transit system capital and operational deficits. Both State and Federal funding sources are available to assist with the deficits estimated for the recommended transit system.

On a State level transit subsidies are provided through the State Transportation Development Act (SB 325). This bill has been tailored especially for transit. The priorities for its use are first: Administation, multimodal planning, transit, roads and streets followed by bicycle and pedestrian needs.

The issue of highways using SB 325 funds is a concern which needs to be recognized. Over the past few years SB 325 monies have been used for highway improvements in the County. This was an interim measure based on the premise that this transportation study would be examining transit potentials and would make a recommendation regarding transit needs.

The other major sources of revenue for the transit system come from the Federal Government in the form of the Urban Mass Transit Act (UMTA) of 1964 and UMTA Act of 1974. The 1964 Act provides money for capital expenditures using an 80 percent Federal and 20 percent local matching ratio. It must be mentioned that there is a great deal of competition for these funds throughout the County and State. Therefore, in programming revenues it has been assumed that a one year delay will occur before the transit agency can be expected to receive Federal money.

Three sources of revenues can help offset operating and capital subsidies. On a Federal level the UMTA Assistance Acts of 1964 and 1974 can provide major assistance. From past trends it appears that the capital grant request can be funded, especially those qualifying under Title II and IV where special assistance is provided for the elderly and handicapped.

The Transportation Development Act, Senate Bill 325, is the major source of revenue on a State level. In Fiscal Year 78-79 the County received $900,000 in TDA funds which were allocated for multimodal and planning and administration, bicycle system improvements and road improvements for the County. It is anticipated that this amount will increase at a rate of six percent per year. Since the County did not operate a transit system previously, these funds may be used to pay for either capital or operating costs. These funds may also be used as the local 20 percent match for Section 3 Capital funds from the UMTA Act of 1974. Locally, transit district funds are available, and local monies in the form of fare box revenues will be collected as part of the transit operation, it was recommended that transit district taxes should be initiated as the last source of income.

SUMMARY OF RECOMMENDATIONS

San Luis Obispo County was found to have a need for public transit as demonstrated by the large percentage of potential captive transit riders (the yound, old, handicapped, and disadvantaged). To serve the mobility needs of these groups and provide a service which can be a starting point for encouraging less usage of private automobiles in the County, the following recommendations are made:

> An intercommunity transit system be provided to serve Baywood/ Los Osos, Cambria, and Cayucos five days per week; Paso Robles, Atascadero, Templeton, and Santa Margarita five days per week; Nipomo five days per week; San Luis Obispo, Avila Beach, Pismo Beach, Morro Bay, Grover City, Oceano and Arroyo Grande five days per week.

Intracommunity transportation service be provided as follows:

Fixed-route transit systems in San Luis Obispo and Five Cities Area; Dial-A-Ride systems in Atascadero, and Morro Bay.

An exclusive three-bus Regionwide handicapped transportation system.

AVIATION ELEMENT

AVIATION ELEMENT

INTRODUCTION

The Aviation Element of the Transportation Plan is concerned with two aspects of air travel in the County; the transportation of people and goods, by air, and the system of airports which serve this transportation mode. Much of the research information used for developing the recommendations given in this report were taken from the County Aviation Plan report prepared in 1970. It is intended that this chapter will supersede the policies and recommendations of that 1970 County Aviation Plan.

Air passenger travel in particular was analyzed in detail and new recommendations made. The availability of more recent data from the work carried out during this study and preliminary results from the Statewide Aviation Study enable this aspect to be updated from the 1970 work. Results of the air passenger demand analysis are contained in the Phase III Technical Report of the San Luis Obispo Regional Transportation Plan.

Layout plans have been prepared for each of the airports and transmitted to the State and Federal Administering Agencies. Adoption of the Transportation Plan will give cause for a review of approved Layout Plans. This review will become part of the update process.

In recent years, the County Airports have been the subject of several studies. During 1970, the San Luis Obispo Aviation Plan was completed and adopted by the Board of Supervisors. It then became the policy of the County as applied to the local airport system. The International Engineering Company was thereafter commissioned by the County to prepare Layout and Master Plans for each of its airport properties. Reports were produced and submitted to the Board of Supervisors. Airport Layout and Master Plans have been used by the Board of Supervisors as the basis for capital improvement programming. An Airport Development Plan for the San Luis Obispo County Airport has recently been completed and included in this Plan, graphically showing the recommendations presented in this element.

This plan describes the development of airport facilities over the short term period (to 1982) and the long term (1982 to 1995).

Discussion of the Airport at Paso Robles (owned and operated by the City of Paso Robles) has only been included to emphasize the Regional significance of this airport to all air travel in the County and especially to North County residents. Also, to maintain consistency between County Plans and the City Plans for Paso Robles Airport.

OBJECTIVES

To insure that the developing system of airports within the County will complement the State and national system of airports.

Provide general aviation airports within 30 minutes of all urban centers in the County.

Provide facilities for air passenger and cargo service to serve population centers within the County and adjacent transportation terminals.

Provide for efficient use of air space and compatibility of adjacent airfields.

Provide adequate facilities to land base an optimum number of general aviation aircraft within the County.

Provide for quick and efficient access to the airport for all users.

To minimize the nuisance effect of the airport on its surroundings.

Provide air facilities to service industrial needs currently developing within the County.

To encourage compatible land uses associated with the airports on land development.

To keep current with aviation technology.

ASSUMPTIONS

The future growth of air transportation in the County will relate to national and state trends.

The future growth of air transportation will be related to the population as it is now or even increase slightly on a per capita basis.

The national policy of aid to air transportation development will continue or increase.

Within the planning period, developments in surface transportation, intermodal connections and aircraft technology will affect the number of operations, locations or type of facilities required.

Economic development of the County will take place in accord with the current policy of encouraging agriculture, recreation and tourism and selected clean industry.

EXISTING SYSTEM

At present, there are three public owned/public use airports in the County; Paso Robles Airport operated by the City of Paso Robles, San Luis Obispo and Oceano County Airports and a number of additional public and private use airports. In addition, there are a number of private airports which are either closed to the public or have restricted use. Figure 17 shows the locations of the existing public use airports.

TABLE 8

FUNCTIONAL CLASSIFICATIONS OF AIRPORTS
AND SOME PRIVATE AIRSTRIPS
(San Luis Obispo Region)

FUNCTIONAL CLASSIFICATION	AIRPORT		NO. OF RUNWAYS	LENGTH OF RUNWAYS (FEET)
11 C	San Simeon	0+	1	4300
11 C	MacGillivray	0x	1	3400
11 C	Warren	0x	1	2000
11 C	JRK Ranch	0+	1	2300
1 C	Paso Robles	*x	2	4700, 6009
11 C	Sinton	0+	1	3000
11 C	Jones	0+	1	1500
III A	Camp San Luis Obispo	0+	1	2700
11 C	California Valley	0x	1	2500
1 C	San Luis Obispo	*x	2	4000, 4000
11 C	Weir	0x	1	2700
11 C	Wherling Ranch	Ox	1	3000
11 A	Oceano	*x	1	2270

LEGEND:
* public owned
0 private owned
x public used
+ private used

Table 9

FUNCTIONAL CLASSIFICATION CATEGORIES

STATE OF CALIFORNIA

I AIR CARRIER AIRPORTS (A/C)

These are airports where regularly scheduled commercial airline (carrier service) is available. Interstate carriers must be certificated by the U.S. Civil Aeronautics Board (CAB) and intrastate carriers must be certificated by the California Public Utilities Commission (PUC). A/C airports may also serve general aviation operations.

A. International Airports

These are airports which accommodate a high frequency and variety of interstate and international flights. They serve as collection and distribution terminals for international travel and for air passengers traveling to and from other regions of the nation.

B. Primary Airports

These are airports which have a substantial percentage of interstate flights predominantly in the short and medium haul range. International and long haul national flights are limited and in some airports may not be accommodated.

C. Secondary Airports

These are airports which almost exclusively accommodate short haul (less than 600 miles) and scheduled air taxi or scheduled commuter service. The classification includes all air carrier airports which are not Primary or International; i.e., secondary airports comprise the majority of air carrier served airports.

II GENERAL AVIATION AIRPORTS (G/A)

These are airports which predominantly serve privately owned aircraft. Publicly-owned government aircraft may be based here. Such airports may provide charter, instruction, aircraft maintenance, and other commercial services. No scheduled commercial airline service is provided. A primary function of all G/A airports is to serve local aircraft owners.

A secondary function of G/A airports is to provide access to areas which are relatively inaccessible by commercial airlines. They may therefore provide passenger or flight service for those requiring speedier or more direct service than is provided by the ground mode.

A. Air Transport Service

Public use airports which provide unscheduled air taxi and/or air freight service. They have a significant number of based aircraft and itinerant operations, and provide a full range of aircraft related services (i.e., instruction, repair, maintenance, charter, etc.).

B. Community Service

There are public use airports which provide similar services as air transport service but do not have air taxi or air freight service.

C. Local Area Service

These are public or private airports which have few, if any, based aircraft and minimal services. Operations are almost exclusively training and/or agricultural oriented.

III MILITARY AND JOINT USE AIRPORTS

A. Military Joint Use

These are military airports, where by agreement the operating military department permits some degree of civil use.

These are the codes for civil use:

1. Open to all civil aviation.
2. Open to scheduled air carriers or other specified civil users.
3. Weather alternate for scheduled air carriers by permit.

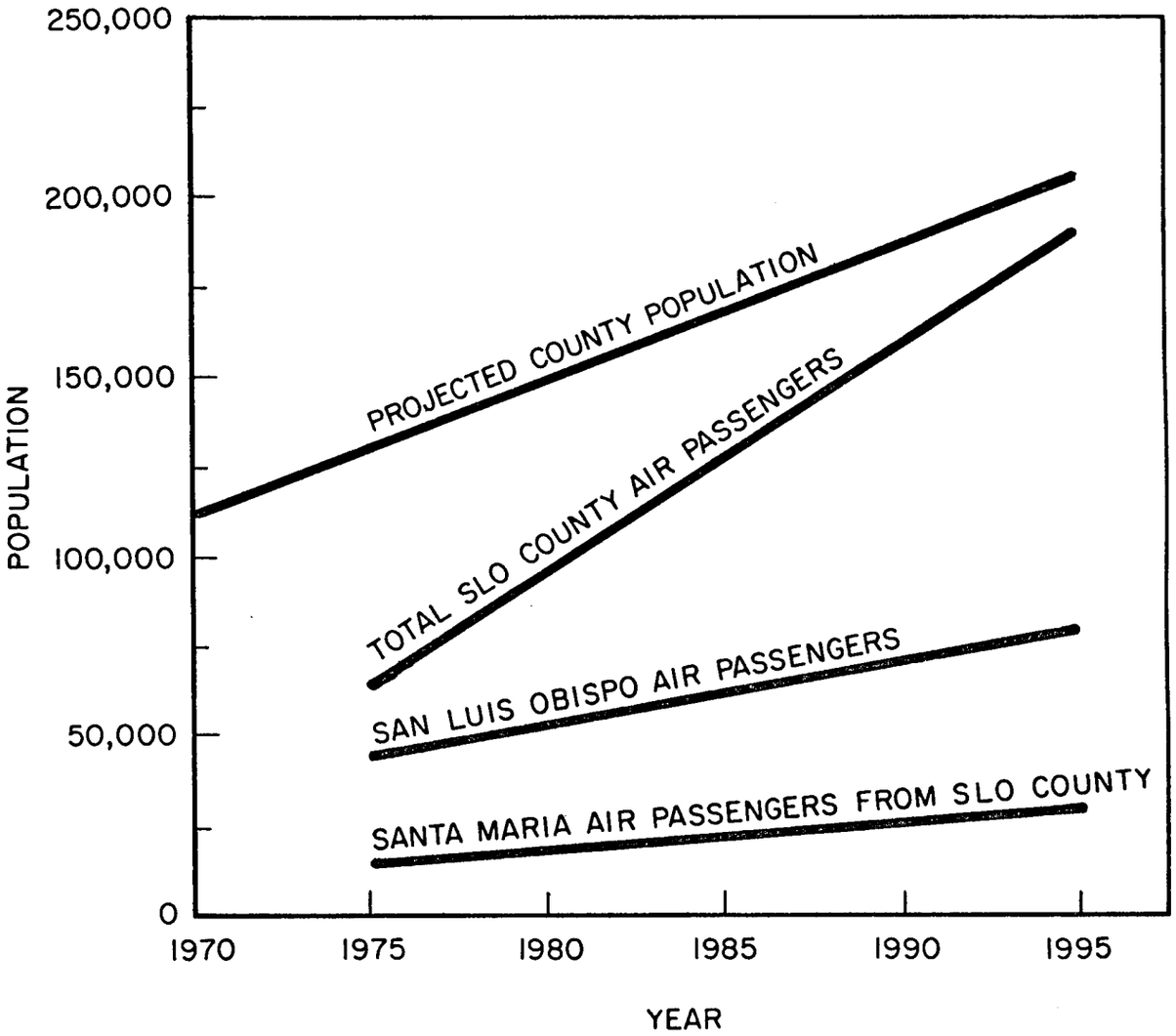
B. Military

These are military airports operated for exclusive use by the military.

IV SPECIAL USE AIRPORTS

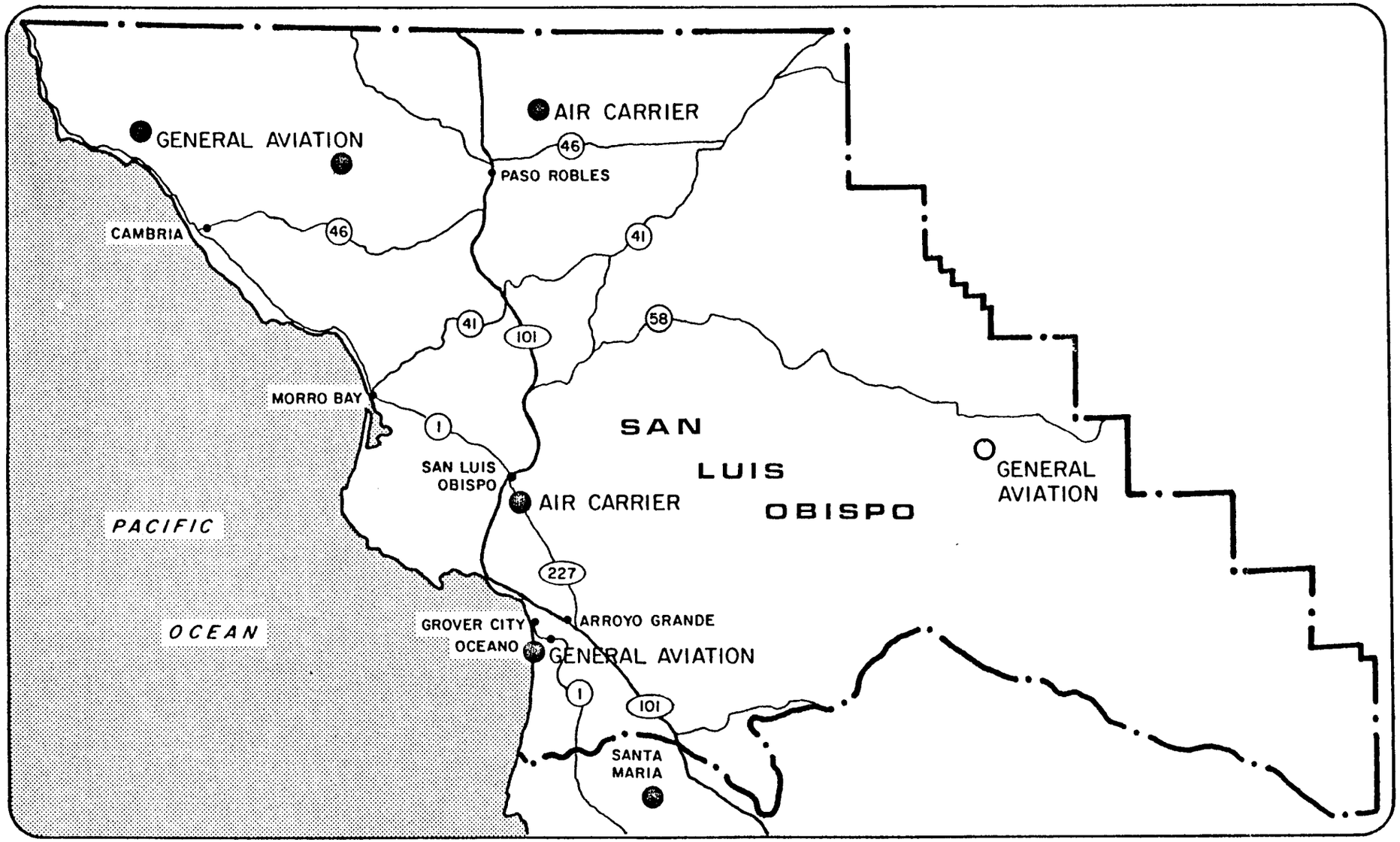
Special Use

Used exclusively for unique commercial or training purposes. Seaplane bases, heliports, blimp bases, parachute drop zones, balloon launching sites, glider ports, etc.



ANNUAL AIR PASSENGER PROJECTIONS
SAN LUIS OBISPO COUNTY

FIGURE 16



LEGEND

- PAVED
- GRADED/PAVED

AVIATION ELEMENT

EXISTING AIRPORT LOCATIONS

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGAWAY

FIGURE 17

Classification of Airports in the County

As part of the statewide California Transportation Plan, the State is classifying airports on the basis of their primary function or purpose. The purpose is to establish common terminology for the California Transportation Plan, to assist in providing performance data in terms that are common to all regional plans, and to permit evaluation of levels of service and needs on a consistent statewide basis.

The Air Carrier classification considers the ability of the airports to accommodate travel demand. Such demand consists of the numbers of passengers and their desired destinations as indicated by the length of haul.

The functional classification categories and descriptive criteria are summarized in Table 9. A list of the County's airports and their functional classifications is contained in Table 8.

Air Passengers

Scheduled passenger service is provided by Swift Aire Lines at San Luis Obispo Airport with that being the base of operation. Service is provided to the San Francisco--Los Angeles corridor and the Central Valley. In addition to 86,000 passengers, Swift Aire carried 122 tons of air freight in 1977.

Located outside the southern portion of the County is the Santa Maria Public Airport which also serves passengers from the southern port of the County. This facility is served by Swift Aire also.

General Aviation

General aviation activity is found at all three public airports. This activity is measured in terms of based aircraft and number of operations (take-offs and landings) for a stated period. This activity for the County Airports is shown on page 84.

FUTURE NEEDS

Air Passengers

During the 1977 calendar year, travelers made 92,002 air passenger trips to and from the County (excluding Santa Maria Airport).

Based on a 1974 Air Passenger Survey, the distribution between the air carrier airports serving the County is:

Paso Robles	7 Percent
San Luis Obispo	74 Percent
Santa Maria	19 Percent

It is estimated that for the projected County population of approximately 205,000 persons in 1995, the air passenger demands will reach 188,000 passengers per year. Under the recommended airport plan, the distribution between airports is expected to remain similar to that shown above.

General Aviation

Page 84 shows the present and projected general aviation activity at the two public use airports in the County. These figures, which are based on the statewide Aviation Study, predict an increase in general aviation activity of almost 100 percent by 1995. The two public use airports provide emergency medical air transport services on a frequent-as-needed basis.

Air Attack Aircraft

Paso Robles is the home of a joint use air attack base. Both the California Division of Forestry and the U.S. Forest Service base air attack aircraft at Paso Robles. In 1977, these aircraft dispersed 625 tons of fire retardant. This services the entire County.

Air Cargo

Air freight activity in the County is presently limited by equipment. Swift Aire provides limited air freight services and has only the capacity and size capability for limited amounts and types of commodities and, consequently, is not able to serve the existing demand. No air freight is available for most of the special products shipped out of the County.

Over the planning period, the potential exists for greatly expanding air freight operations in the County. Paso Robles airport is interested in providing a base for this type of service and is actively exploring means of encouraging freight operations. In addition to the special commodities produced in the County, there is the potential for carrying mail.

The configuration of the Paso Robles Airport lends itself to development of this character. It is so located and designed to readily adopt to an even larger facility. If the possibility materializes for a location other than the Paso Robles Airport, such as in the eastern sector of the County or the air freight facility being discussed near Coalinga in Fresno County, then a re-evaluation of the General Plan will be required. Here again, problems of County acceptance will bear heavily upon the decision.

With the increase in demand over the planning period, it is apparent that commercial aircraft operations must be expanded to provide special freight services in addition to that carried on regular passenger services.

ISSUES

One of the key issues in aviation planning tends to be the noise associated with aircraft operations. While land use zoning around an airport is designed to reduce the potential adverse impact, increases in aviation activity and changing aircraft characteristics can create unavoidable conflicts.

Land uses around the San Luis Obispo Airport are more varied and present more problems than Oceano Airport. The increases in air service at San Luis Obispo over the past few years and the realization that regional air travel demands are centered around San Luis Obispo has raised the question of a county airport as a critical issue in the aviation element of the plan. Residents in the southern part of the City of San Luis Obispo have a natural concern about the potential expansion in activity level at the airport and the noise impacts which could result.

Aircraft noise readings were taken at San Luis Obispo and Oceano Airports in 1975 and noise contours were developed as a result of this study. There are no residential areas within unacceptable noise level areas at the present time. However, by 1985, when the Federal Noise Standards became more stringent, each of these airports will be required to reduce aircraft noise, increase clear zone area, change land use or a combination of all three. It is expected that aircraft engine development will result in quieter aircraft in the future. Each of the airports will continue to be monitored for noise levels.

According to the Environmental Impact Report prepared for the Regional Transportation Plan in assessing the environmental impacts of increased air passenger travel, it must be realized that future air passenger demands are not of a magnitude to require a major increase of aircraft capacity or in-flight frequencies. Small capacity aircraft (15 - 30 seats) of the type used at San Luis Obispo Airport will be adequate to carry the demand with less than 100 percent increase in the number of aircraft operations. There are 22 departures from San Luis Obispo today. The future commercial air passenger demands is unlikely to significantly change the present level of environmental impacts. When the demand reaches a point which requires larger than 30,000 pounds gross weight, flights served with those aircraft will utilize Paso Robles and Santa Maria airports.

RECOMMENDED AVIATION PLAN

A key point to be emphasized in this plan is that there is no need for a new County airport. While San Luis Obispo is recommended to take a substantial role in providing commercial air service, Paso Robles and Santa Maria will also have an important role in service to the northern and southern parts of the County. Oceano and Paso Robles have the potential to take an active proportion of the County's general aviation needs. All three are essentially regional airports, and even Santa Maria in Santa Barbara County can be considered as part of the regional system because of its role in serving air passengers in the South County.

Air Passenger Service

In terms of service to the community, flight frequency is one of the key measures of convenience and service. At the present time, the 22 departures at San Luis Obispo Airport provide a considerable choice of schedule. Local residents can make a day visit to Los Angeles or the San Francisco Bay Area and likewise residents of those areas can make a day visit to San Luis Obispo County. Apart from the convenience, this service reduces the dependency on the automobile for interregional travel.

TABLE 10
RECOMMENDATIONS TO COUNTY OWNED
AIRPORT FACILITIES

	OCEANO		SAN LUIS OBISPO	
	Phase I - To 1982	Phase II To 1987	Phase I - To 1982	Phase II To 1987
Runway length	2,270'	2,270'	3,800'	4,800'
Runway load	12,500	12,500	30,000**	30,000**
Lighting runway	MIRL	MIRL	MIRL	MIRL
-- taxiway	No	MITL	MITL	MITL
-- approach	No	No	Yes	Yes
Landing rules	VFR	VFR	IFR	IFR
Tower	No	No	Yes	Yes
Passenger gates	0	0	4	4
Passenger Terminal	0	0	5,000 sq'	5,000 sq'
Restaurant offices	0	0	5,000 sq'	5,000 sq'
General Aviation Terminal	Yes	Yes	Yes	Yes
Cargo terminal	0	0	2,500 sq'	2,500 sq'
General Aviation Operation	50,000	60,000	175,000	200,000
General Aviation Storage-based	30	50	250	300
-transient	70	100	50	50
Repair - airframe	Major	Major	Major	Major
- engine	Major	Major	Major	Major
- navigation	Radio	Radio	All	All
Fuel	80 & 100	80 & 100	80 & 100 Jet	80 & 100 Jet
Auto Parking (Total	45	55	350	400

**- Runway 11-29 extension should be constructed to reduce aircraft weight capacity to 30,000 lbs. maximum (present 80,000 lbs.)

Federal Aviation Administration - Div. Aero. recommendations construction of extensions to 80,000 lbs. to accommodate new quieter STOL aircraft which are heavier than 30,000 lbs.

The overall evaluation of air passenger service in the County shows that the air travel needs of the community would be best served by a continuation of serving air passengers at San Luis Obispo. Paso Robles and Santa Maria should continue to provide service to residents in their immediate areas.

Past history has indicated that cost considerations (and hence lowered fares) would lead to larger aircraft being gradually introduced into service. However, with increasing demand a move from 15-passenger aircraft to those with a capacity for around 30 passengers should not result in any decrease in service levels. It is not recommended that the maximum gross weight of aircraft be greater than 30,000 lbs. because the close proximity of the airport to urban areas could impose unacceptable noise impacts.

Land Uses - General

Land use planning for airport compatibility is concerned with the need to provide for those activities best able to take advantage of their proximity to the airport. Consequently, two factors should be considered: (1) the need to prohibit those uses which are harmed by proximity to airports, and (2) to provide for those uses which benefit by such location.

The first factor suggests excluding residences and places of public assembly from the immediate vicinity of the airport. The second suggestion is to provide for such uses as airport-related industry, agriculture, industries, which do not interfere with flight operations, and airport related or travel oriented commercial activities as well as open space. The San Luis Obispo County Airport Land Use Commission exercises joint land use jurisdiction and makes recommendations on land use applications surrounding each public airport in the county.

Typical uses which are compatible with airports include:

1. Open uses involving few people, e.g., agriculture.
2. Inherently noisy activities not sensitive to additional noise.
3. Indoor uses which can be protected from airport noise by sound proofing.
4. Airport-allied uses which have an incentive to locate close to the airport.

In addition to these uses, the airport area can be a desirable location for industrial and commercial activities which can take advantage of passenger or air freight services. Special provisions for such establishments in the form of industrial or office parks are, if conditions permit, of benefit not only to such business but to the entire area.

Land Uses - Safety

Land uses around airports are governed by Part 77 of the Federal Air Regulations, which provide for airspace control and land uses under those airspaces, as applicable to the specific class and size of airport.

Land Uses - Oceano Airport

Oceano Airport is primarily intended to serve local south San Luis Obispo County residents and tourist travelers. As such, it is ideally situated. Although a few residential properties lie off the westerly takeoff pattern, with proper zoning controls, they are not viewed as a threat to the airport operation. The landing pattern overlays agricultural, residential and industrial areas. The remaining takeoff pattern overlays future recreation areas and the beach. The remaining surrounding land usage is a beach resort and agriculture. Further development of industrial uses may require the accommodation of some executive and cargo aircraft. This may necessitate future airport improvements now envisioned. The San Luis Obispo County Airport Land Use Commission has adopted a plan to prevent incompatible encroachment near the airport.

The prime function of this airport lies in its potential to provide services for the recreational and executive flyers. To fully reach this potential the following should occur:

1. All park and recreation properties must be upgraded and developed for maximum recreational uses.

2. Motels and other resort businesses must be encouraged and proper locations be provided on Pier Avenue, Roosevelt Avenue and near the airport.

3. Every effort should be made to upgrade the quality of development in Oceano Beach, including remaining substandard buildings and setting higher standards for new construction.

Land Uses - Paso Robles Airport

Because of its location outside the built-up portion of the City of Paso Robles, City-County coordination is needed regarding land uses at and surrounding the Paso Robles Airport. Except for the State Facility for Boys, the area surrounding this airport is primarily devoted to agriculture, some of it is agriculture preserve. Older rural residential subdivisions exist, however, with the potential to change the area's land use character. Urban and suburban services are not available under County jurisdiction.

Land Uses - San Luis Obispo Airport

Land uses around the San Luis Obispo Airport are more varied and present more problems than either of the other two principal airports. Perhaps this fact gives an explanation why so much controversy has surrounded the programs and continued operation of the facility.

It has become clear, however, that there will be no influx of larger aircraft or jet carrier services. The airport will be managed so the ambient noise levels will not increase and should decrease as technological advancement makes it possible; no commercial airline services will be encouraged to use the facilities other than commuter-type airlines. The terrain, social and environmental restraints prevent this type of airport operation.

Protective land use controls are in full force and they have effectively restricted potential hazards. The San Luis Obispo Airport Land Use Commission has adopted an Airport Land Use Plan which has established specific standards for the development of compatible surrounding land uses. Both the City and the County have been diligently studying the area to agree upon the most suitable future land uses in the vicinity of the airport. A new Countywide Land Use Element being prepared by the County will resolve many of the past disputes about future development. Although there may be opportunities for some airport related industry, much of the land will be devoted to rural residential, light rural industrial, and agricultural uses.

With the modification of the Los Osos Road interchange at U.S. 101, better access will be provided to the San Luis Obispo Airport.

Public utility lines surrounding the Airport have been placed underground. Edna Road has been upgraded to facilitate heavier intercommunity traffic. An Airport Site Development Plan and Lease Standards have been prepared to improve the appearance and quality of operation. All of these needed measures are intended to make the airport a better neighbor within its surroundings while maintaining the facility as a safe and efficient public service.

Lease Operations

Airlines operation and agency offices need to be improved within terminal areas. Better functional relationships should be considered in the design of new terminal facilities to improve passenger movement and bagggage handling.

The County should work with business interest and commercial carriers to improve freight handling at their respective airports. Construction of warehousing, shipping and receiving facilities are necessary. These spaces could be leased to an airline or freight forwarding company.

The tie-down and hangar areas need to be developed and leased as demands for space dictate. Transient parking areas should be developed under a rental program.

The operating agency should take positive leadership in stimulating the improvement of schedule, equipment and level of service by the airlines serving this County. A program of incentives, coupled with guaranteed levels of higher service, should be implemented in order to secure maximum convenience for patrons. Sewer and water facilities should be upgraded and kept sufficient to meet airport demands and needs.

A strong, positive program of promoting recreational activities of the County should be initiated, particularly oriented to flying, tourists and clubs. The private sector should be encouraged to provide these items. Transportation facilities from the airport to recreation places should be greatly improved. Organized programs should be offered to flying organizations to encourage their patronage.

Executive and business conference flying should be fully promoted. Careful programming and fully arranged airport accommodations should be resolved in advance of these activities.

Although public use airports have been made available for non-airport activities in the past (i.e., auto racing), these types of uses should be discouraged.

The County should encourage the development of private launching areas for soaring craft. In addition, action to direct skydiving clubs and hang gliding activity to the property potential target sites should be taken.

Facilities - Oceano Airport

The prime function of this airport lies in its potential to provide services for recreational and executive flyers. The type of supporting facilities to support this use should be developed. For the increased general aviation demands, the following improvements are recommended:

1. Additional land should be acquired to increase the number of parking spaces for airport users.

2. The dilapidated hangar at the end of Runway 11-29 should be replaced with new hangar facilities in accordance with the location on the airport layout plan. Adjustments to the lease and standards for hangar development should be in accordance with current standards for airport design.

3. Acquisition of clear zones and aviation easements at each end of the runway should be completed as soon as practicable.

4. Runway 11-29 should be extended southeasterly an additional 400 feet to allow the threshold to be displaced an equivalent amount on Runway 11 or a clear zone avigation easement should be obtained for Runway 11.

Facilities -- San Luis Obispo Airport

San Luis Obispo Airport will require improvements over the planning period. These improvements and the location at the airport are shown on Figure 18 . Key recommendations are as follows:

1. A new terminal building should be constructed to accommodate present and future passenger demands, office space and other amenities for airline operations.

2. Increase parking capacity to accommodate the forecast air passenger demands.

3. Improve access from San Luis Obispo to the airport (e.g., extend local transit service, airport limousine, dial-a-ride, etc.)

4. Lengthen runway 800 feet to accommodate ILS landings.

5. Medium intensity runway lights and medium intensity taxiway lights for Runway 11-29.

6. Sewer and water services for entire airport.

7. Increase aircraft storage facilities.

Facilities - Other Airports

There are two other small, privately owned airports in the County. Although neither are currently open for general public use, both have been proposed for more extensive use by the public, primarily for recreational purposes.

These airports include the Hearst Airport at San Simeon and the California Valley Airport in Carissa Plains. If and when these airports are opened for public use, a determination of compatible land uses, hazard protection and avigation easements over the surrounding areas should be made and provided for. The County should also take the appropriate steps to insure that these airports would meet the FAA and State standards for operation.

IMPLEMENTATION

The majority of the improvements outlined in the Capital Improvement Plan are projects that have been included in the National Airport Systems Plan. As such, they will be funded wholly or in large part by Federal funds designated for this purpose. All of these projects that will use Federal funding are included in the five year Capital Improvement Program of the 1972 National Airport System Plan.

For those projects where matching local funds are required, it is furnished from local general funds with assistance from the State Airports Aid Program. Allocations of general funds may be required to complete the constrained plan.

Two funding options exist. One would be from the State fund from which local airports can borrow money to pay their local share. Such a fund is financed through the gas tax, which is not returned to users. A similar fund exists to assist harbor projects and is administered by the State Department of Navigation and Ocean Development. The second alternative is to increase general fund allocations.

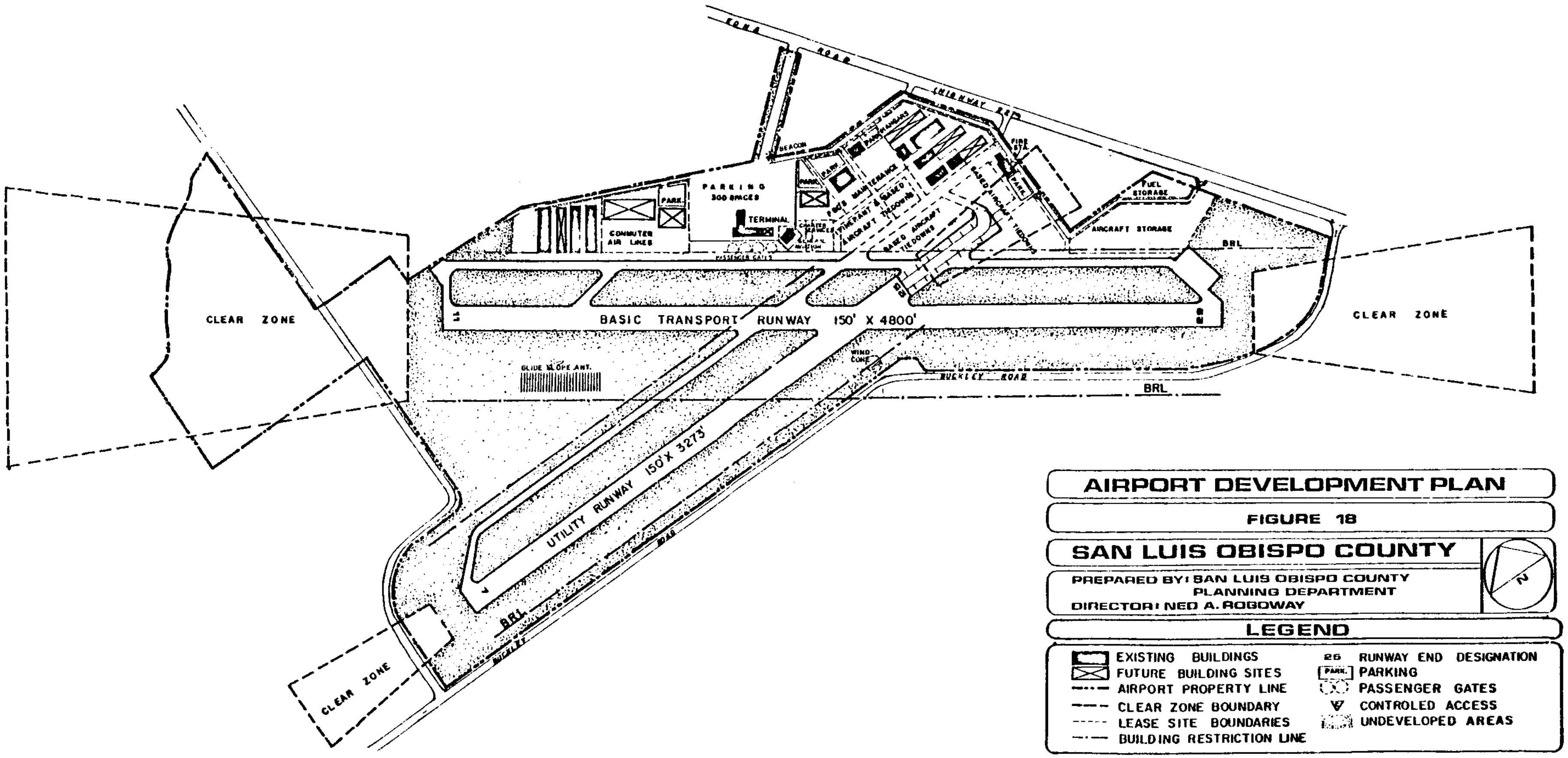
Airports are financed through Federal and State funding programs (with local matching), support facilities (sewer and water), and day-to-day operations money from general funds. The state, each year, provides up to $5,000 for each airport in the State. This pool of state money can be then used to cover local costs or for matching federal funds.

Federal financing through the Airport Development Aid Program (ADAP) will assist financing all projects outlined in the Federal Aviation Systems Plan. Most projects are funded on a matching basis while others (Instrument Landing Systems, for example) are wholly financed through ADAP.

There are a number of documents at the County level which can be used to implement this element of the Transportation Plan. These include plans affecting surrounding land uses and those which are airport site specific.

The Airport Land Use Commission Plans provide for orderly growth of the airports, keeping them compatible with surrounding land uses, as does the County's proposed land use plan for airport areas.

Furthermore, the County airports have layout plans showing future proposed improvements, a Capital Improvement Projects program outlining County expenditures for these projects and, at San Luis Obispo County Airport, a Lease Site Development Plan. These can be used for further implementation at the specific airports.


AIRPORT DEVELOPMENT PLAN
FIGURE 18
SAN LUIS OBISPO COUNTY
PREPARED BY: SAN LUIS OBISPO COUNTY
PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY
N
LEGEND
EXISTING BUILDINGS
FUTURE BUILDING SITES
AIRPORT PROPERTY LINE
CLEAR ZONE BOUNDARY
LEASE SITE BOUNDARIES
BUILDING RESTRICTION LINE
25 RUNWAY END DESIGNATION
PARKING
PASSENGER GATES
CONTROLED ACCESS
UNDEVELOPED AREAS
CLEAR ZONE
CLEAR ZONE
CLEAR ZONE
BASIC TRANSPORT RUNWAY 150' X 4800'
UTILITY RUNWAY 150'X 3273'
PARKING
300 SPACES
TERMINAL
COMMUTER AIR LINES
PARK.
AIRCRAFT STORAGE
FUEL STORAGE
BRL
BRL
BRL
BUCKLEY ROAD
WIND CONE
GLIDE SLOPE ANT.
PASSENGER GATES
BASED AIRCRAFT TIEDOWNS
BEACON

OTHER TRANSPORTATION MODES ELEMENT

OTHER TRANSPORTATION MODES ELEMENT

This element deals with alternate transportation modes not usually considered when we think of transportation systems. This element discusses harbors, seaports, pipelines, transmission lines, rail and transportation terminals. All of these are important means of transporting goods and people that complement the prior elements of the Transportation Plan.

HARBORS AND SEAPORTS

Harbors in the County accommodate three major activities - petroleum shipping, commercial fishing, and recreational boating.

Commercial fishing activity is centered at Morro Bay and Port San Luis (Avila Beach). In addition to commercial fishing, party boats also operate from these harbors, as well as from Cayucos Pier and San Simeon Harbor. Recreational boating is popular at these harbors. Although Port San Luis has no boats berthed at wharfs or slips, numerous boats are berthed at harbor moorings.

Harbor Plans have been adopted for each of the three major natural harbors, Port San Luis, Morro Bay and San Simeon. In addition, each one has been recommended by the State as Harbors of Refuge. The Harbor Plans describe future improvements and are available at the office of the appropriate jurisdiction. They are summarized in this chapter.

PORT SAN LUIS

Port San Luis, located just to the southwest of Avila Beach is under the jurisdiction of the Port San Luis Harbor District. Development of the harbor protection facilities is carried out by the Army Corps of Engineers. The District has the responsibility to prepare plans and construct the marinas, docks, piers and other on-shore facilities.

Issues

Port San Luis is the only natural harbor in the County capable of being protected for berthing of larger vessels. Early plans for harbor development anticipated construction of deep water berthing facilities for cargo handling purposes. Commodities originating in this County or intended to be transported to the central region of the State were analyzed in reports covered by the Corps of Engineers. It was concluded that an insufficient flow of goods generated from or transmitted to the area would justify the construction of these berthing facilities for some time to come.

Harbor plans developed for the port, including the construction of breakwater and small craft harbor facilites, were submitted to the people in the form of a bond election several years ago. Financing of the development of the harbor by bond was rejected by vote of the people of the district.

The facilities presently located in the harbor are extensively used with demands exceeding the capacity. Boat slips and additional commercial uses are needed to meet the present demand. However, until protective devices, particularly the breakwater is built, these needed facilities must wait.

Program

The presently proposed Harbor Development Plan calls for a construction program to be developed over a period of about three years. This plan would create a Harbor of Refuge with a total area of 169 acres. At full development, the harbor would have 410 slips spaces, and 500 moorings, with provisions for recreational, commercial, and sport fishing craft, as well as a boat hoist. Two breakwaters would be constructed to protect the improvements. The south breakwater would be attached to Smith Island and a longer detached breakwater would be built across the mouth of the inlet. There would be two harbor entrances. The first phase of the proposed development has been refused

a Coastal Permit and breakwater funding is questionable at this time. Without the breakwater only a small portion of the development could be put in operation.

Any interim development in addition to the moorage, should make full utilization of the land area currently utilized by the Port San Luis Harbor District.

It is now appropriate that more modest facilities be considered for Port San Luis Harbor and that a revised Harbor Plan be prepared based on the County's Local Coastal Program. The following objectives and criteria should be used for interim development and in the revision of the Harbor Plan.

1. Commercial fishing should receive first priority in harbor development.

2. Recreational facilities should be sized based primarily on projected Regional needs.

3. Historic qualities of the Port San Luis Pier should be preserved and enhanced.

4. The cost of the breakwaters needed to create a Harbor of Refuge should be born primarily by the State and Federal agencies.

5. There must be careful consideration given to any fill activity up coast from the San Luis Pier due to environmental and mechanical factors.

6. Any new facilities should not overtax the circulation or utilities of Avila Beach. Avila Road's scenic, rural character should be retained.

Union Oil Company presently owns the pier in the north part of the harbor and leases wet land under the pier. At the expiration of the usual life of this pier, it may be replaced by a mooring facility. The P. G. & E. facility will be retained in the plan and at the moment, P. G. & E. is operating under a long term lease. There are no current plans for expanding the existing deep draft facilities.

Morro Bay Harbor

Morro Bay Harbor is a highly protected harbor separated from the larger Estero Bay by a long narrow protruding sand spit. It is the only developed harbor of refuge south of Monterey Bay. The entrance to the harbor lies between a large "volcanic plug" known as Morro Rock, and the northerly tip of the sand spit. The harbor is utilized by the commercial fishing industry and recreational boating. A Coast Guard facility is located within the harbor. The harbor depth limits its use by deep draft vessels. The County supports the improvement of this harbor facility within the City of Morro Bay.

Estero Bay

Estero Bay presently has five moorings used for transferring commodities. One is used by P.G. & E. to service its Morro Bay generating station, one by Texaco for refined petroleum products, one by the U.S. Navy for jet fuel, and two by Standard Oil for outbound crude oil.

Standard Oil Moorings

A key issue in the past has been Standard Oil's proposal for a deepwater port three miles out, which would be used by deep draft tankers (200,000 - 400,000 tons dead weight). The proposal provided an ultimate throughput of 600,000 barrels per day of petroleum products destined for the Richmond refinery. At the present time, Standard Oil has dropped their application and this plan does not propose a supertanker facility because of the many problems and environmental impacts that would be encountered. An amendment to this element (as well as possibly other elements) is a prerequisite to a renewed application.

P.G. & E. Moorings

Another mooring facility serving the Pacific Gas and Electric Company Morro Bay generating plant has been enlarged to accommodate increased ship capacity. Having experienced curtailment of gas supplies, oil storage capacity at the plant site must be doubled to provide for an adequate fuel supply. The mooring berth is located one-half mile northwest from the plant and can accommodate up to 50,000 ton tankers.

On-shore tanks are located several miles northeast of the generating plant near the Texaco tank farm and piped from the moorage to the tank and then back to the plant. Since the crude oil used in the plant is almost in solid state at normal temperatures, heating and transport assist facilities have been constructed in the present tank farm and the plant site. The energy shortages prevailing today have forced major oil users like P. G. & E. to adjust to new methods of processing and this must be facilitated in the most beneficial way. The new moorage is appropriate to the site because fewer ships will need to off-load to keep pace with the plant requirements. No future improvements are anticipated.

San Simeon

A recreational harbor facility planned for San Simeon was originally proposed as part of a large new town development plan for the Rancho Piedras Blancas. The plan, prepared by the owners, the Hearst Corporation, was adopted by the Board of Supervisors in 1967. A network of tourist and residential uses proposed to surround the beach and harbor justified the construction of a large mooring and harbor services complex. A breakwater to protect the harbor from southwesterly storms was an integral part of the project. The Corps of Engineers studied the feasibility of the project and concluded the Federal interest would have to wait until the community plans progressed to justify their participation.

Nevertheless, San Simeon Harbor is an important natural harbor because of the distance and coastline conditions to the north. It remains as the only natural location left for storm refuge between Morro Bay and Monterey Bay a distance of 90 miles. These factors as well as the passage of time justify the review and update of plan for San Simeon Harbor.

HARBORS AND SEAPORTS

Recommendations:

1. Seaport facilities should be planned and developed consistent with Federal, State and local policies. Maximum coordination should be achieved.

2. Use of Federal and State programs and grants or loans in aid should be actively sought for harbor and seaport development.

3. Commercial and recreational development should keep pace with demands in the County. Financial and environmental resources should be thoroughly analyzed to determine feasibility for those developments.

4. Access routes and parking, among other support facilities, should keep pace with harbor development and patronage demands.

Port San Luis

1. This Harbor District should revise the 1968 Harbor Plan utilizing the objectives and criteria contained herein.

2. Harbor protective devices should be financed at the State and Federal levels to create a Harbor of Refuge.

3. Interim harbor improvements should be provided to facilitate commercial fishing and sports fishing enterprises. Some of the larger fishing and recreational draft should be accommodated within the Harbor development.

Estero Bay

1. Standard Oil mooring facilities should be closely monitored for future expansion of facilities. A supertanker facility is not proposed by this plan.

San Simeon

1. The U.S. Corps of Engineers should review the need and feasibility of a small craft harbor and Harbor of Refuge should be programmed.

2. Harbor and surrounding area development plans should be carefully reviewed in conjunction with the development of the Piedras Blancas Plan and the local coastal efforts. Effects upon traffic generation should also be re-analyzed.

PIPE AND UTILITY TRANSMISSION LINES

San Luis Obispo County is threaded with a network of "lifelines" used to import and export essential needs of the population - water, sewerage, natural gas, oil, and electrical energy. To develop a complete transportation system, it is important to consider all forms of transport including those forms which move commodities through fixed systems. Certainly, we cannot disregard those possibilities which foretell more effortless and efficient forms of transport utilizing fixed system. As we see greater advancement in technology of mechanized systems and as we see greater needs for energy conservation, one can readily recognize why more and more use of pipe and other transmission lines will become more prevalent. The impact of the use and placement of these lines needs to be carefully considered as they tend to influence future land use patterns in areas through which they pass.

WATER

The San Luis Obispo County Water and Sewer Plan adopted in 1972 advocates major pipeline construction for water transport. When completed, the network of water transmission lines would provide supplementary water supplies to all urbanizing communities within the County, as well as provide sources of water for certain intensive agricultural areas. At present water transmission lines exist between Lopez Lake to a terminal reservoir east of Arroyo Grande where it is then dispersed to the various South County communities. A transmission line links Santa Margarita Lake to the San Luis Obispo Whale Rock Reservoir to the same treatment plant.

Further recommendations and a more detailed analysis of the County Water System can be found in the County Water and Sewage General Plan Element.

SEWERAGE

At present, there are no sewerage outfall lines other than those transporting treated sewage into the ocean. However, the Sewerage Plan for the County contemplates the ultimate elimination of ocean outfalls while advocating inland transport of sewage effluent for beneficial reuse. Proposals include early elimination of ocean outfalls at Cambria and Morro Bay. In the latter case, sewage would be transported as far as seven miles easterly to El Chorro Regional County Park near Camp San Luis Obispo. Proposals also call for future elimination of the South County outfalls at Pismo Beach and Oceano, to be transported to agricultural areas. Two other inland projects warrant comment. Sooner than later, the San Luis Obispo treatment plant will have to alter its discharges into San Luis Creek. Consideration of sewage transport easterly to agricultural uses in the Edna Valley is one of the primary considerations. Finally two North County projects are already underway. Treated sewage from the new Atascadero Sewage Disposal Plant will soon be transported to a disposal area near the Atascadero State Hospital. Also the new Templeton sewage collection system now consolidates and transports to the Paso Robles treatment plant eight miles

north. Agricultural or parkland irrigation will allow a large portion of the treated sewage to percolate back to the underground water basins.

For a more detailed analysis and further recommendations of the proposed sewer system, see the County Water and Sewage General Plan Element.

NATURAL GAS

With the decline of natural gas supplies in the County, no new transmission lines are contemplated. Recently, Cambria was the last community to be outfitted with a natural gas distribution system. Gas service is supplied from Southern California (Southern California Gas Company) through Santa Maria paralleling U.S. Highway 101. A smaller gas line serves the Pacific Gas and Electric Morro Bay generating plant from the northeast. The annual throughput of this gas line has been reduced since the curtailment of natural gas supplies from Canada. The possible siting of a major LNG terminal at Rattlesnake Canyon which is opposed by the County, would require a major new gas line traversing the County. This possibility is discussed in the Terminals Section of this element.

OIL

As previously cited in this report, there are a number of ocean oil terminals existing at Port San Luis and in Estero Bay. From each of these terminals, oil is transported through pipeline to and from various points for processing in the State. One such point is the Union Oil Refinery on the Nipomo Mesa and the attendant Santa Maria Oil Fields. Union Oil transports by pipe from Santa Maria to the refinery and to the Avila Beach tank farm and pier-terminal. In addition, a Union Oil pipeline cuts north and east across the County to the County boundary near Cholame.

The much larger terminal facilities in Estero Bay present a much more complex picture. Pipelines originating from the Texaco, Standard and U.S. Navy Terminals extend north and easterly from Estero Bay to the County boundary.

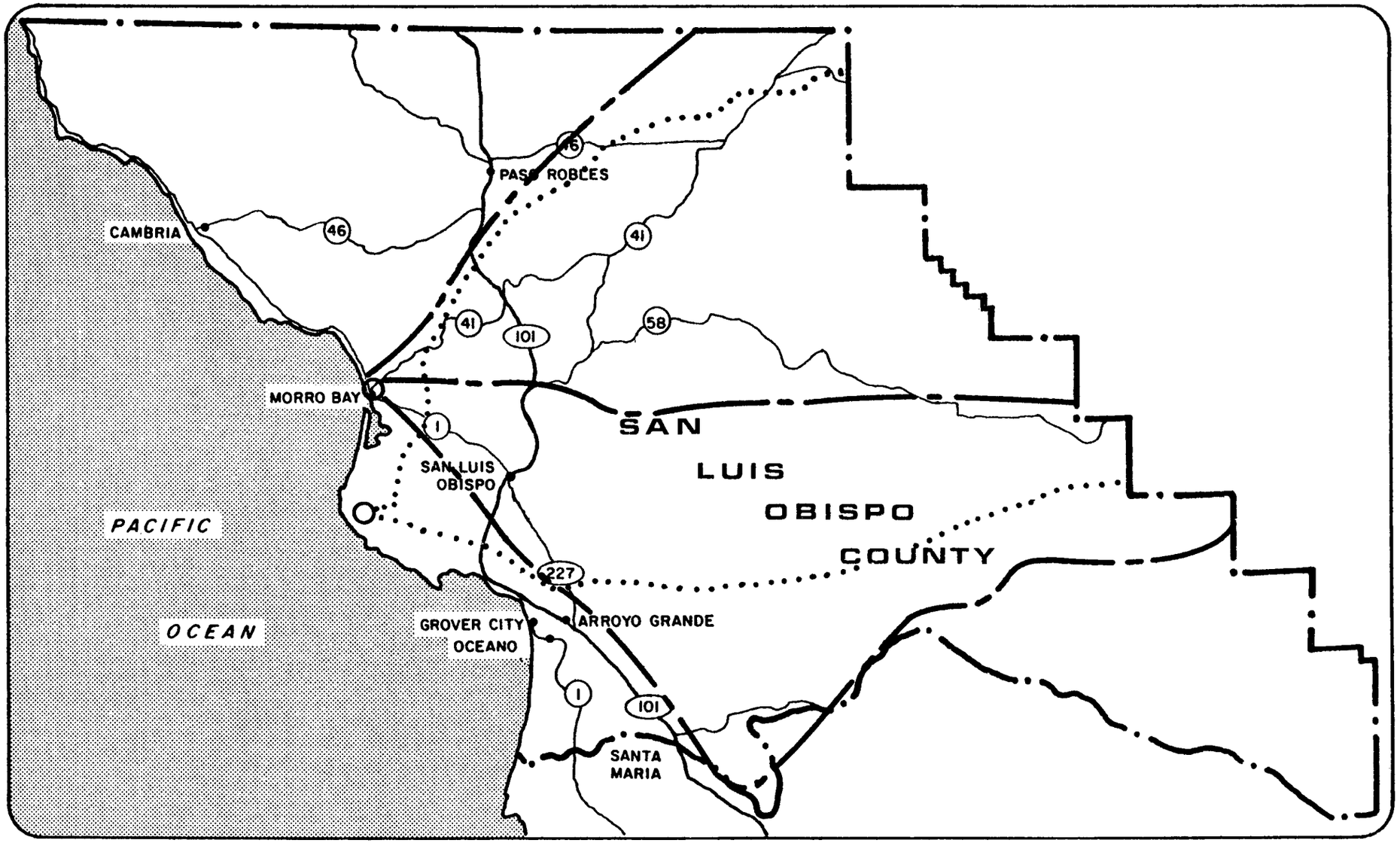
P. G. & E. has built new storage tanks and pipeline as well. Discussion of this proposal can be found under Harbors.

UTILITY TRANSMISSION LINES

Two types of tranmission lines transport electrical energy in the County; those which transport power from Pacific Gas and Electric plants in Morro Bay and at Diablo Canyon; and those which transport electrical impulses through underground coaxial cables. For purposes of this report, a transmission powerline is defined as transporting 110KV or more.

Power transmission lines crisscross much of the County. Most of the older lines emanate from the Morro Bay Generating Plant with lines crossing the County northeast, east and southeast. With the construction of the first two generating units at Diablo Canyon, large tower transmission lines travel northeast and east from the site. Right-of-way for additional towers have been acquired along these alignments to serve an additional four units if constructed. Normally associated with towers and powerline construction are detrimental impacts associated with rights-of-way clearing, access road construction and unsightly and out of scale structures. Careful route planning and tower placement have been used on the current project. In addition, helicopters have transported tower parts for on-site construction, thus eliminating the need for some access roads in steep terrain.

Very few comments are necessary about inter-regional telecommunications cable. Generally, the main lines parallel U.S. Highway 101. A transcontinental line enters from the ocean near Los Osos and parallels Los Osos Valley Road to the main terminal facility owned by Pacific Telephone and Telegraph, near the Los Osos Road - Foothill Boulevard intersection. All common carrier cables are installed underground as well as the very large terminal facility. With the exception of an occasional maintenance truck in view, few people realize some of the nations's key facilities are located in this County.



LEGEND

ELECTRICAL TRANSMISSION LINES

..... DIABLO CANYON

— - — MORRO BAY

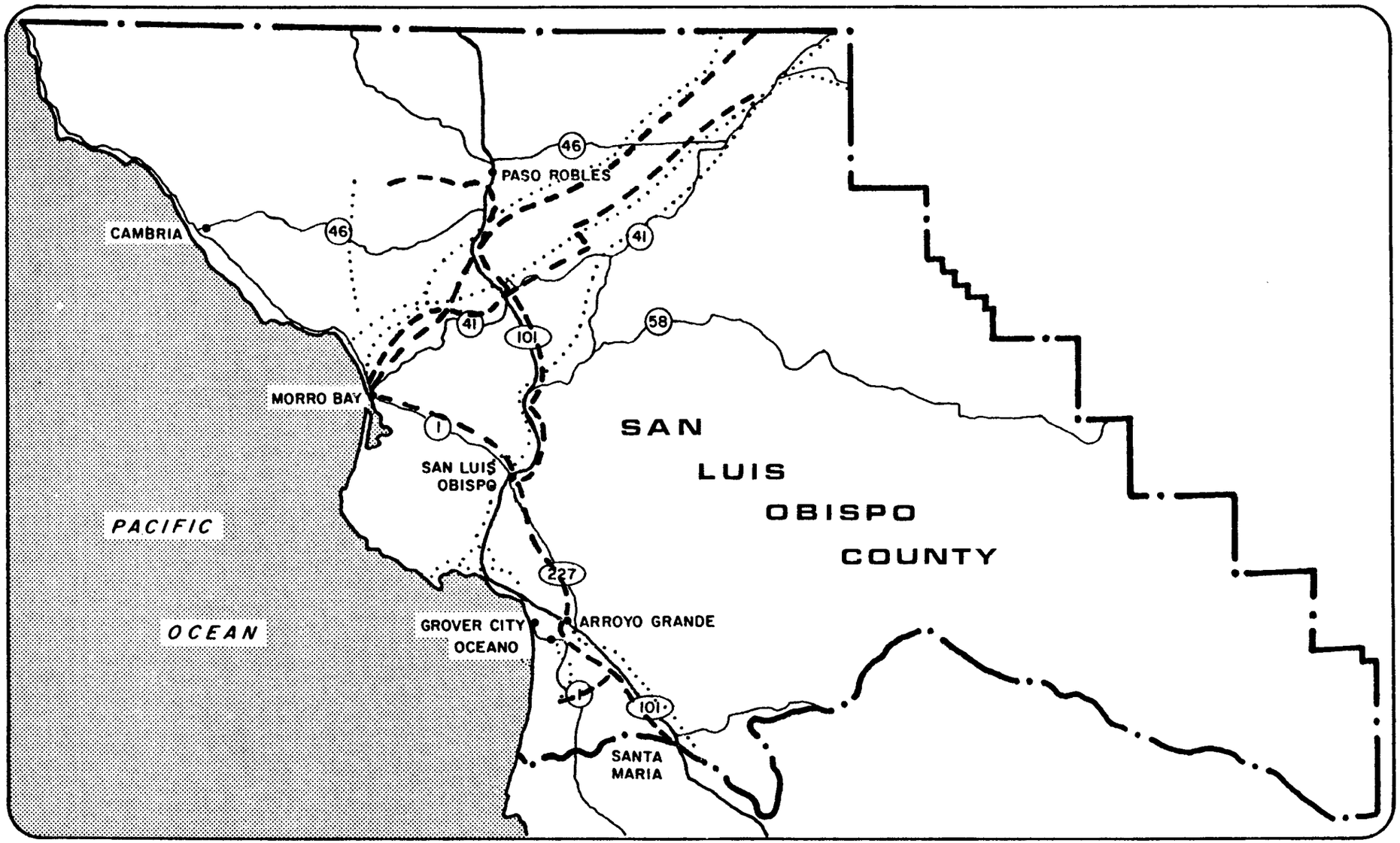
OTHER TRANSPORTATION MODES ELEMENT

TRANSMISSION LINES

FIGURE 19

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT

DIRECTOR: NED A. ROGOWAY



LEGEND

..... OIL TRANSMISSION

– – – – GAS TRANSMISSION

OTHER TRANSPORTATION MODES ELEMENT

TRANSMISSION LINES

FIGURE 20

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

The potential for a hazardous situation arises from the presence and transport of highly radioactive nuclear fuel within the County. The hazard is recognized by the utilities, and government agencies, and steps have been taken to minimize the risk of a release of high levels of radiation. Some level of risk does still exist, however, and it is appropriate to have a contingency plan for an accident. This aspect is discussed in the Safety Element of the General Plan.

PROSPECTS FOR THE FUTURE

On the long term, some of the inherent advantages of pipelines used for transport of goods should be recognized. Not too many years ago a serious proposal to transport solids (in that case coke), through pipelines to a transportation terminal was made. Although this did not materialize, it is entirely conceivable that many types of solids can be carried efficiently and inexpensively through underground pipes. As new methods of transportation like this became plausible, studies about the environmental and social effects of the carriers should have been carefully analyzed before being authorized. Studies may very well conclude that pipeline transportation is less deterimental than other existing transport forms, therefore they should be encouraged.

Looking even farther ahead, although it is conceivable that energy power can eventually be transported through transceivers without the benefit of wire, indications are the economic considerations and required technology would delay this concept from becoming reality until a time beyond our planning horizon. Relief from the network of overhead transmission lines would certainly be a welcome improvement.

RECOMMENDATIONS

Water & Sewerage

1. To achieve the maximum land use intensity allowed by the General Plan, the County is dependent upon importation of water. The County Water and Sewer Plan sets forth the current County programs. Coordinated water transmission facilities will also be needed.

2. Pipe and aqueduct alignments should minimize impacts to environmentally sensitive areas.

3. Environmental restraints and careful construction methods should be used in creek, road and earthquake fault crossings.

4. Alternative designs, fitted to the natural environment and supplementary recreational uses of water carriers and impound areas should be considered wherever possible and practical.

Oil - Gas

1. New oil and gas lines must be carefully planned and approvals should be required by the local jurisdiction.

2. Environmental constraints should be recognized and all mitigation measures cited in environmental impact reports should be required to be implemented and monitored.

3. Pipe alignments should minimize impacts in environmentally sensitive areas.

Utility Transmission Lines

1. Route selection criteria for new overhead transmission lines should aim at minimizing environmental impacts. Intrusion into the skyline should be minimized.

2. Where technology is feasible, underground installation should be used.

3. New towers should be constructed by helicopter in steep terrain instead of by way of new access roads.

4. More pleasing tower designs should be used near highways or in appropriate locations.

5. Rights-of-way should not be cleared of vegetation underneath transmision lines except where necessary.

GENERAL - LONG TERM

1. Consideration should be given to the long term benefits to be derived from commodity transportation by pipeline and other forms of energy transmission.

2. Where it is found economically, socially, and environmentally beneficial, private and semipublic transport companies should be encouraged to use these alternative means of transportation.

3. Joint use of rights-of-way should be encouraged for other transmission lines or recreational uses.

RAILROADS

Existing System

Rail passenger service is provided by Southern Pacific under contract to AMTRAK. At the present time, service is provided to one station in the County at San Luis Obispo. One train per day serves San Francisco and Los Angeles with 150 persons per day using the service.

Southern Pacific provides the County with rail cargo service at various locations along the railroad right-of-way. Primarily, service is extended to San Luis Obispo and Oceano with other service in Paso Robles, Santa Margarita, and San Miguel.

Rail passenger service and rail cargo service is of Statewide importance and should be encouraged by CALTRANS by inclusion in the California Transportation Plan.

TERMINALS

The activity hub for many forms of transportation is a terminal facility. For purposes of this study, a terminal is where people or goods change their mode of transportation, either from one type to another type, or from one carrier to another. Because there are so many terminals, we will concentrate only upon those major terminals that generate traffic worthy of recommendations related to this plan. Those terminals include truck terminals, bus terminals, airport terminals, harbor terminals, and railroad terminals.

Truck Terminals

Cargo loading and un-loading normally takes place at the point of origin, change of mode or destination. Most terminals are not well defined and some are located at trucking company headquarters. The terminals in the County are small by comparison to those located in industrial center.

Since the main trucking corridors have long since bypassed San Luis Obispo County, most of the cargo traffic is locally generated. Agricultural commodities are the primary products moved from the County, including field crops from Oceano, Templeton, and Paso Robles, and cattle from Templeton, Atascadero, and Arroyo Grande. Packaged goods are transported by two statewide carriers with terminals in San Luis Obispo, and Paso Robles, and one local company in Arroyo Grande. One delivery company operates from two terminals located near the South County boundary and in San Luis Obispo.

In general terminal locations have been chosen because of their immediate access to transportation systems. Very little can be recommended to improve their efficiency.

Bus Terminals

Present bus terminals are those associated with the Greyhound Lines. Buses stop at each of the communities along U.S. 101, with the primary station at San Luis Obispo. Although constructed only a few years ago, the relationship of the SLO Terminal to tourist and activity centers is very poor. Arriving passengers must be transported from the station. Therefore, interface with other modes of transportation is vital for passenger convenience. Some modifications may be necessary to other community terminals for greater passenger convenience, others may have to be closed for greater efficiency.

With the start up of a County-wide transit system, careful consideration must be given to terminals at community transfer points and to a major terminal facility in San Luis Obispo. For instance, terminal locations in the central area of Morro Bay, Paso Robles, and Arroyo Grande will provide a convenient transfer location for regional carriers and the local bus systems. The main terminal point should be in the vicinity of the government center and/or the Central Business District. These terminals should have adequate parking and exemplary appearance.

Airport Terminals

Of prime concern at San Luis Obispo County Airport is the passenger terminal. Convenience and efficiency are primary objectives in the design and improvement of this facility. At present, the terminal needs improvement, enlargement and beautification to be considered a quality gateway terminal. The Aviation Element advocates the upgrading of this terminal during the 1977-1982 period. The planning for terminal facilities should provide for proper coordination with other community transit systems. Car rental agencies should be within the building; motel limousine and cab services should be available on call; and some scheduling of buses when feasible should be programmed. The building should have adequate visitor and storage parking and be appropriately landscaped. Food and convenience items should be available. Figure 21 indicates proposed improvements and schematic design for terminal facilities at the airport. The terminal structures envision the reuse of existing non-aviation related office space.

Pilot lounges are also necessary at general aviation airports. Some are more formalized than others. In addition to those present at San Luis Obispo, and Oceano, pilot facilities should be furnished in some form at all public use airports. Major cargo handling terminal space has been earmarked at the Paso Robles Municipal Airport. Plans by private developers have sparked interest in intermodal transfer points at that facility.

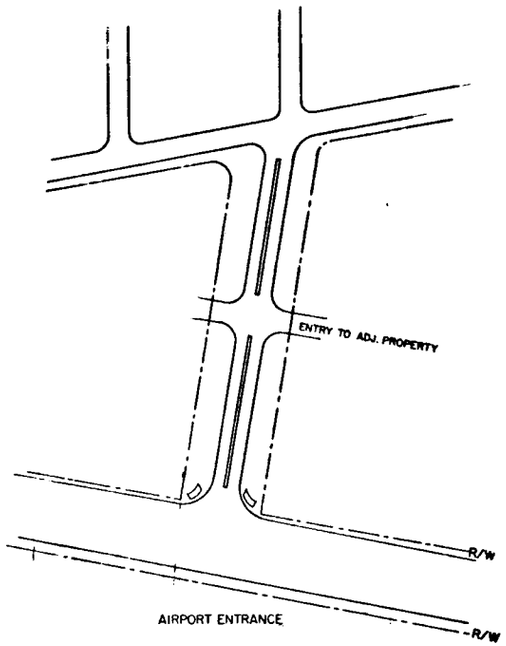
Harbor Terminal

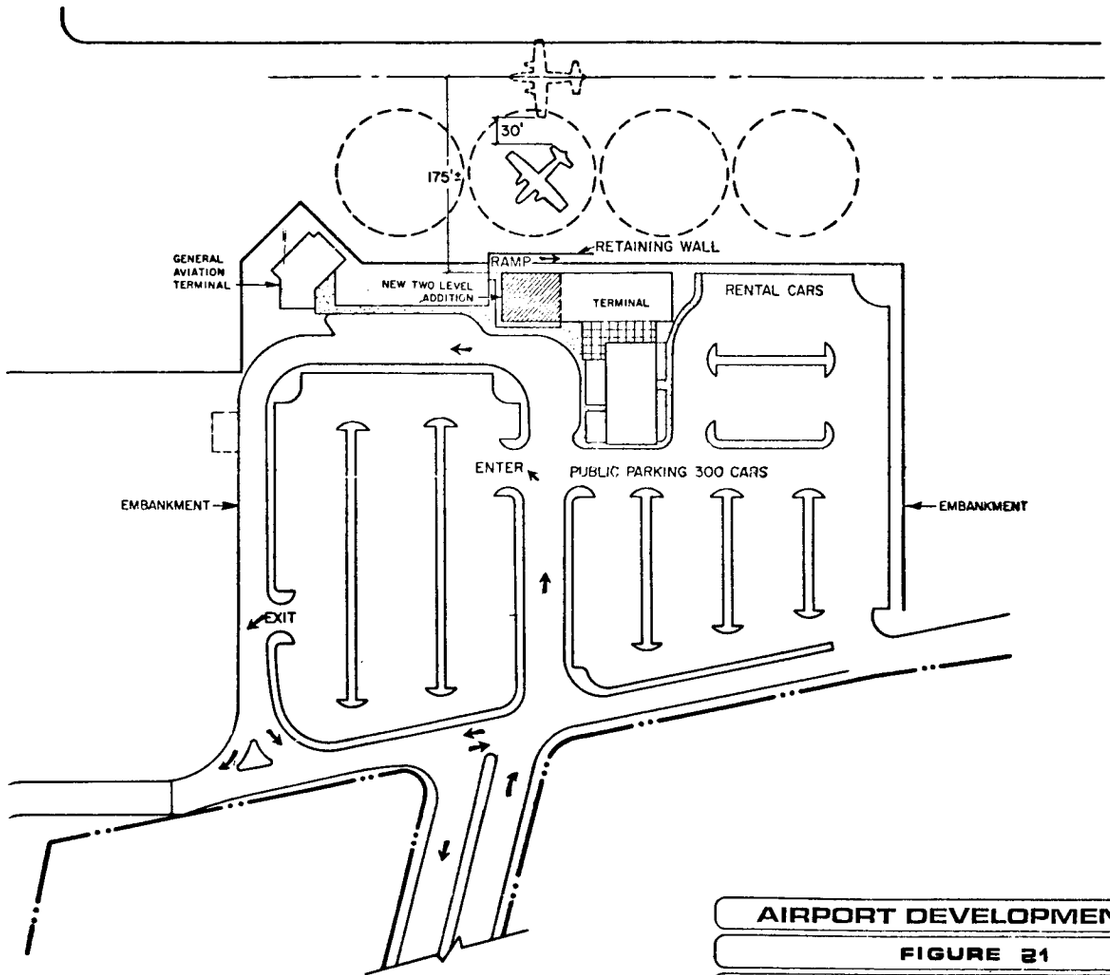
The two major harbors in the County comprise a complex interaction between many interests associated with transportation mechanisms. Terminal facilities are marinas, fuel docks, passenger services and commercial fishing facilities, among others. Only the major terminal facilities will be discussed here.

Pleasure craft terminals are normally associated with marinas. Present facilities are primarily located in Morro Bay. Fuel, lockers and personal services are proper conveniences for the recreationalist. Private enterprise will normally keep pace with patronage demands at these facilities. Terminal facilities should be programmed into the improvement scheduled for Port San Luis.

Sport fishing is a major enterprise at the two developed harbors. Terminal facilities are adequate for the present at Port San Luis. Future development of the harbor should call for an upgrading of the sport fishing terminal conveniences.

Major commercial fishing terminals are located in Morro Bay and Port San Luis. Port San Luis has the advantage of adequate consolidated services for the trade levels now experienced. However, to





AIRPORT DEVELOPMENT PLAN

FIGURE 21

TERMINAL FACILITIES

SAN LUIS OBISPO COUNTY

PREPARED BY: SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT
DIRECTOR: NED A. ROGOWAY

entice more commercial fishing activities, harbor protective devices are necessary first, then additional facilities for the commercial boats and crew will become necessary. Off loading devices, showers, storage lockers, sewage removal services and other conveniences need to be installed during the development program. The much larger terminal at Morro Bay also needs upgrading.

Railroad Terminal

The main railroad terminal in the County is located in the City of San Luis Obispo. Passengers traveling to and from the entire County board and detrain the AMTRAK line from this station.

The City of San Luis Obispo provides bus service as an interface with the terminal area. Various studies undertaken in San Luis Obispo have made recommendations about upgrading the area and providing better access. More needs to be done however.

One of the first important tasks is for recognition of this facility. It must be understood that the AMTRAK terminal will again become a key gateway terminal and its increasing role will demand attention by railroad and governmental authorities. Studies of its impact upon community facilities and services will be necessary to properly accommodate the expected activities generated from the area. The terminal area needs a general uplift; landscaping, defined parking, separation of passenger and employee parking, interior remodeling, passenger conveniences, etc. Other modes of transportation services need to interface with terminal activities much like those recommended for the airport terminal; taxi and motel limousine services, bus connection, car rental availability among others.

The railroad company activities and AMTRAK activities should have separately defined spaces. Cargo handling activities seem to be intermixed in the terminal area. State and local authorities should work with Southern Pacific Railroad officials to map out a program for separating and upgrading cargo handling and railroad operating areas. Intermodal transfer points should be identified and parking areas and transfer devices should be improved. Railroad operations activities should be separated from the terminal area with its own parking and office spaces.

Liquified Natural Gas Terminal - Rattlesnake Canyon

The State of California has recently passed legislation setting out a procedure for selecting a Liquified Natural Gas Terminal facility along the coast. One site within San Luis Obispo County, Rattlesnake Canyon, 4 miles north of Port San Luis has been selected for final evaluation. The California Coastal Commission has ranked the site second most desirable for the first Liquified Natural Gas terminal in California. This ranking will bear heavily on final decisions for LNG siting to be made by other State and Federal agencies.

A thorough staff review was prepared by the County Planning Department giving a description of the site and the proposed terminal, the environmental impacts anticipated, safety considerations, local policy statements, and proposed conditions placed by the County if the LNG facility was to be built at Rattlesnake Canyon.

The most significant impacts of building at Rattlesnake Canyon were determined to be the following:

1. Destruction of the archeological sites.

2. Disturbance of marine habitat by blasting to remove rocky pinnacles and shoals and construction of breakwater.

3. Alteration of wave current, littoral transport patterns and marine habitat by the breakwater and trestle.

4. Restriction on further development of harbor facilities at Port San Luis and the surrounding communities at Avila, in particular the area around the San Luis Bay Inn.

The Board of Supervisors has unanimously voted to recommend that Rattlesnake Canyon be ranked lowest of the five sites due to the safety and environmental impacts noted in the staff report.

Terminal Recommendations

1. The CALTRANS commodity flow should be closely monitored and its affect upon cargo terminals should be analyzed in the Plan update process.

2. Coordination between the different modes of transportation is essential so that effective and efficient interfacing at terminal locations can take place.

Bus

1. The Greyhound bus terminal requires efficient and convenient interface with other modes of transportation.

2. In light of current recommendations in General Plan Elements, the San Luis Obispo Greyhound terminal as the main County bus terminal may need alteration or enlargement at some future date. Relocation may be appropriate to better position the terminal to other related activities in the city and transportation corridor out of the city.

3. Greyhound terminal facilities in other communities should be modernized, altered, or relocated as patronage needs demand.

4. As transit services are instituted in the North Coast area, terminal facilities should be located in close proximity to the center of tourist activities and local transit services.

5. A central transit facility should be located in San Luis Obispo close to the Central Business District and the Government Center where inter and intracommunity transit systems interface.

6. Smaller transit facilities should be located near the Central Business Districts in Cambria, Grover City, Morro Bay, Pismo Beach, Arroyo Grande, Atascadero, and Paso Robles.

7. These terminals should provide for adequate vehicular parking and be properly landscaped.

Airports

1. A program of rebuilding the passenger terminals at San Luis Obispo Airport should be instituted during the next five years. Terminal design should provide for at least 5,000 square feet of passenger and ticket agency spaces. Convenience facilities and passenger services should be incorporated in the plans. Additional space for offices, restaurant and support activities should be added as demand warrants.

2. Provision for passenger transit conveniences should be included at the San Luis Obispo terminal including taxi and limousine shuttles to activity and tourist centers, car rental agencies, and connection to the local transit system.

3. Terminal parking areas should be enlarged to accommodate peak demands for passengers, vehicle storage and rental cars. Terminal area should be landscaped.

4. Provision for pilot lounges (general aviation) should be made at each public use airport.

5. Implementation of the San Luis Obispo County Airport terminal proposal and related facilities (Figure 21) should be given a high priority.

Harbors

1. Central sport fishing terminals should be developed at Port San Luis and include off loading devices, showers, storage lockers, sewage removal services and other service conveniences. Passenger services and conveniences should also be provided.

2. Small sport fishing terminal facilities should be located on the piers at Cayucos and San Simeon.

3. Off-street parking should be located adjacent to marinas in sufficient quantity to serve the facilities.

Railroad

1. A comprehensive study of the AMTRAK terminal area should be made to identify a neighborhood action program. A detailed site development plan should be prepared for the area. Because of its regional importance, this should be a joint private and State and local government effort.

2. Improvements to the terminal building, the parking lot, landscaping, and other passenger conveniences should be installed at an early date.

3. Passenger services such as taxi and motel limousine service, bus connection and rental cars should be made available to the terminal.

4. Railroad employees and operations activities should be separated from the terminal and housed in another location.

5. Cargo handling areas should be defined and improved and transfer handling devices modernized to keep railroad operations competitive.

6. Parking areas should be installed in carge handling areas.